



IMAGINE MEMORIAL

A planning partnership with Councilwoman Natalyn Archibong,
Atlanta residents, and Georgia Tech's School of City and Regional Planning

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I. INTRODUCTION

Memorial Drive is a key historic corridor for the City of Atlanta and the eastern half of the metropolitan area. Heading from downtown to the eastern end of city limits, a traveler will pass by Oakland Cemetery, past and current manufacturing hubs in Cabbagetown and Reynoldstown, through the center of the 1864 Battle of Atlanta, and Bobby Jones' home golf course. Along the way are historical neighborhoods that are being restored, renovated, and reinvented as more people seek to live closer to the city in places with character and history.

Despite the strong communities on either side, in recent decades the route has served as more of a dividing barrier rather than a seam of activity. High travel speeds, deteriorating infrastructure, and a lack of multimodal options have limited kept some parts of Memorial Drive from being more than a commuter route to downtown. However, the corridor is seeing an unprecedented amount of new construction and reinvestment as Atlanta's real estate market rebounds from the Great Recession and responds to the next phase of the Atlanta BeltLine's Eastside Trail.

At the request of Atlanta City Councilmember Natalyn Archibong, students in Georgia Tech's School of City and Regional Planning conducted a semester-long studio project examining the corridor from Peachtree Street to Candler Road for opportunities to improve travel efficiency, safety, development, and character. This plan is eligible to be grandfathered as a Livable Centers Initiative (LCI) report.

The plan advances three goals in common with the LCI:

- Identifying underused land for redevelopment into more desirable destinations. By focusing on clusters as far ranging as the Cottage Grove and Boulevard intersections, this plan identifies opportunities to increase the local tax base, attract trips, and reduce vehicle miles traveled (VMT).
- Enhancing multimodal connectivity. Community stakeholders demanded improvements to Memorial Drive itself, and this plan calls for improvements to reduce auto speed and increase safety along the corridor, while simultaneously maintaining efficiency. At the same time, the plan calls for bicycle and pedestrian facilities throughout the corridor.
- Proposing public-private coordination to finance some of the transportation improvements and evaluate performance. Specifically, it calls for creating a foundation that would leverage public funding with private donations. This would primarily be applied to multimodal connectivity improvements.

The intensity and diversity of uses on Memorial Drive are already changing quickly, and they will continue changing at a rapid pace in coming years. Responding to these changes with sound transportation solutions will require a robust and ongoing planning process that collects input from all stakeholders and applies their needs in a logical and transparent fashion. The authors believe this report and the LCI program offer a firm foundation for delivering it.

II. HISTORY

Memorial Drive, which up until the 1940s was called Fair Street, earned its name over time with a steady accumulation of historical assets including battlegrounds, neighborhoods, and industrial buildings. Oakland Cemetery is Memorial Drive's most well-known historic attraction, founded in 1850 as "Atlanta Graveyard." The rural garden cemetery was a departure from traditional cemeteries attached to churches. In 1858, the Atlanta Rolling Mill began operations. It was soon destroyed when the corridor became the site of the Battle of Atlanta, and General Sherman finalized the Union's siege of the city. In response, Oakland Cemetery expanded from six to 48 acres to provide much needed burial space. Old ironworks can still be found in Grant Park, a neighborhood built during Reconstruction from the holdings of Col. L. P. Grant, who donated the land for the eponymous park.

By the late 1880's, the corridor was densely populated enough to see the construction a streetcar line. The old mill was restored as the Fulton Bag and Cotton mill (now converted to loft apartments). The historic neighborhood of Cabbagetown emerged as a mill village at the turn of the century. In the 1920's, John F. Faith Elementary (currently being adapted for artist studios) was founded, as was Ed S. Cook Elementary (built on the site of Fair Street School and now home to Wesley International Charter School). The schools both have unique early 20th-Century architectural features.

Several industrial buildings from the 1950s mark Memorial Drive's history as an industrial corridor. These historic Art Moderne buildings include the Pittsburg Plate Glass Company building (adapted for the new Habitat for Humanity Headquarters) and the Atlanta Dairies building (soon to be restored and turned into a mixed-use development). Generally, active neighborhood leaders and developers should be commended for their efforts past and present to preserve and adapt historically significant buildings where possible. They contribute to a sense of place that is one of the corridor's defining characteristics. This report seeks to maintain Memorial Drive's long history as a hub of strong neighborhoods and economic activity, and as a thoroughfare connecting downtown to the suburbs.

Ecological preservation is also a consideration. Atlanta has long been known for a tree canopy that supports a diverse ecosystem and mitigates urban heat effect. These natural resources are quickly disappearing with infill developments. Memorial Drive is home to many white oak trees dating over 150 years old. White Oaks are indigenous to the Piedmont area and indicative of native ecosystems. The corridor is also part of the South River watershed, a tributary to the Ocmulgee, with both Sugar Creek and Doolittle Creek originating in the area. With the proposed trail and streetscape improvements, this study aims to incorporate the restoration and renewal of natural ecosystems along the corridor wherever possible.

III. EXISTING CONDITIONS

The first step of the analysis was a detailed report on existing conditions, which is attached as Appendix A of this report. This report was presented to community stakeholders in a public meeting and made available for input, criticism, and additions. The robust community engagement process is detailed in the next section.

IV. OUTREACH

From its inception, the Imagine Memorial project was intended to use outreach to help residents and stakeholders imagine what their corridor could be. Each finding is informed by values the studio group learned from residents by going to their communities and listening to them. Below is a description of that effort and a compilation of what they had to say.

Residents

There are nine city-designated neighborhoods that directly touch Memorial Drive, with one being in unincorporated DeKalb County. Of these nine neighborhoods, seven have active neighborhood associations that serve quasi-governmental functions, such as recommending zoning improvements to neighborhood planning units (NPUs). These groups broadly have mandates from the residents who live there. The groups the studio

visited include:

- Atlanta Downtown Neighborhood Association (ADNA)
- Grant Park Neighborhood Association (GPNA)
- Cabbagetown Neighborhood Improvement Association (CNIA)
- Reynoldstown Civic improvement League (RCIA)
- Organized Neighbors of Edgewood (ONE)
- Kirkwood Neighbors Organization (KNO)
- East Lake Neighbors Community Association (ELCNA)

These neighborhood groups are part of larger Neighborhood Planning Units (NPUs). An NPU's main function is to make final advisory or denial of zoning applications before they go to the city council. There are five NPUs along within the study area, with one making up the entire eastern half of Memorial Drive. To ensure that every neighborhood was accounted for and every resident had the opportunity to contribute, the studio team went to each NPU meeting between Sept. 1 and Oct. 31 of 2014. In addition, the team collected and studied each existing neighborhood plan, including master, transportation, land use, and development plans, for recommendations based on best practices and sound engineering techniques.

Initially, the studio's outreach team began attending neighborhood and NPU meetings in September 2014. Taking what was learned from the meetings, the outreach team developed a plan to obtain community input by early October. At each October meeting the team took a large hand-drawn map of the

Memorial Drive corridor to each neighborhood. In most cases they communicated with the meeting officials beforehand to secure a spot on the meeting's agenda. They used this time before the neighborhood to formally introduce and explain the studio, answer any questions, explain that studio's goal of a near-complete LCI study, and invited all residents to write notes (Post-it notes and pens were provided) on the large map, or send comments to the studio's email and Facebook page (<https://www.facebook.com/groups/memorialdrivestudio/>). A mailing address was also listed in presentation materials to ensure that those without Internet access could contribute written input.

Institutions

Studio members consulted several public, non-profit and private entities with ownership or other interests in the area. Their presence in the study area give a backbone, public and private, for attracting funding sources for projects. The studio approached these stakeholders in the sense of collecting particular projects and initiatives that will yield a larger method of a comprehensive redevelopment plan for this burgeoning area of Atlanta. They include:

- Georgia Department of Transportation
- Georgia State Building Authority
- Atlanta Housing Authority
- City of Atlanta
- Office of Planning

- Department of Public Works
- Department of Watershed Management
- MARTA
- Atlanta BeltLine, Inc.
- Invest Atlanta
- Atlanta Public Schools
- Drew Charter School
- Historic Oakland Foundation
- Purpose-Built Communities
- Urban Realty Partners
- Integral
- Various other small developers and property owner

Samples of neighborhood feedback (verbatim):

Reynoldstown (Reynoldstown Civic Improvement League)

- "road diet: add bike lanes (if possible, protected lanes), wider sidewalks, trees/greenery, lower speed limits"
- "lite rail on BeltLine, grocery store near Parmalat"
- "pedestrian safety island crossings, actuated green-space, better N/S turning at lights to improve exits from R-Town"

Grant Park (Grant Park Neighborhood Association)

- "no left turn lane (Boulevard and Memorial)", "bookstore"
- "enforce speed to 25 mph"
- "add bike lanes to Memorial, sidewalks between Boulevard and Bill Kennedy"

- “protect and encourage the preservation of the art modern-styled Parmalot dairy buildings (yes as many that can be saved and creatively used) and use federal and state historical preservation tax incentives to make the proformas work. Also preserve the mid-20th century features of the corridor between Boulevard and Bill Kennedy”

Cabbagetown (Cabbagetown Neighborhood Improvement Association)

- “parking considerations to alleviate congestion”,
- “bike lanes, crosswalks on memorial”
- “swimming pool”
- “tennis courts”
- “Trader Joes”
- “easier access to King Memorial MARTA station”

Kirkwood (Kirkwood Neighbors Organization)

- “commercial development on land which adjacent to Memorial”
- “reduced speed limits”
- “design speed lowered to 25 mph”
- “greater access to the south side of Memorial Drive”
- “4-lane portion of Memorial stifles Kirkwood’s southern commercial potential”

Edgewood (Organized Neighbors of Edgewood)

- “duplicate our efforts of the previous LCI study attempt

East Lake (East Lake Neighbors Community Association)

- “sidewalks on both sides of street, in places where there are none currently”
- “road diet”
- “off-street bike route along creek for north-south connectivity”
- “re-stripe/add more crosswalks”
- “no more ‘suicide lanes’ as everyone perceives them as dangerous”
- “east side shuttle from Agnes Scott to Edgewood along Memorial”
- “connectivity to East Lake MARTA or East Ponce”
- “more commercial development and kid-friendly developments (e.g. skating rink)”
- “better lighting”

City Hall Atrium stakeholder public/private/non-profit/citizen meeting feedback

- “We need (rather desperately) a safe pedestrian crossing @ Daniel for East Lake Park; the bulk of our people live North of Memorial and our main/only park is South. Crossing on foot is taking your life In your hands, even as a able-bodied adult. We need a HAWK signal or something MAJOR like that!”
- “The section between Maynard Terrace and Candler Road has very high potential to remain and enhance “Green Zone” with stream corridors and greenspace. Let’s keep redevelopment of built structures WEST of the shipping center near Maynard Terrace.”

- “I think the neighborhood around Walker Park between Whitefoord and Wyman needs basic amenities for existing residents in homes and apartments, especially a grocery store that will not create a “food mirage” for residents. N/S pedestrian connectivity to East Atlanta Village over I-20 would be fantastic. Extending the Sugar Crk Trail to Walker Park would improve multi-use trail connectivity in the neighborhood. If it’s possible to make Atlanta Shopping Ctr a combo of commercial and green space, that would be ideal.”
- “It is very important to preserve existing trees rather than re-plant new trees in all places where no new buildings will stand. And in planning building locations to take into account existing trees and even small green spaces - replanting is not an equivalent, and Atlanta is so special because of its existing urban forest. Thank you so much for the opportunity to comment.”
- “We need safe pedestrian crossing and possibly a major re-design of the intersections of Memorial and East Lake Boulevard, and Memorial and 2nd, where students must cross to reach Drew Charter schools, especially the large and growing new high school.”
- Lewis informed the studio of three GDOT projects which directly affect the study area. He also recommended studying Reynoldstown’s master plan from 2000, along with Edgewood and Kirkwood’s trail map plans. He suggested the City Atlanta 1.0 Plan for a better understanding of bike routes, and suggested not putting bike lanes on Memorial, as Woodward has already been chosen as the route to connect the BeltLine and Capitol Gateway. He recommended looking into a bus rapid transit station at Maynard Terrace, which is not currently in MARTA’s plan for the I-20 BRT corridor.
- A later joint meeting between the planning department and watershed management informed the studio of the large water tank set to go on city property in Reynoldstown, two blocks north of Memorial and adjacent to the BeltLine.

Atlanta Public Schools (APS) -- Jere Smith, Director of Capital Improvement

- Smith explained that APS has no control over sidewalks or any other access decisions unless they are directly on APS property. He admitted there is a need for better coordination with the City. Also, despite the influx of people moving back to in-town apartments, the numbers of children in those developments is negligible. There are currently no plans to expand school facilities along the corridor in the foreseeable future. The main push in terms of capital improvements is to increase the numbers of sports facilities at the schools.

Public sector entities

City of Atlanta Planning Department -- Jonathan Lewis, Interim Assistant Director of Transportation Planning, and Jessica Lavandier.

Georgia Department of Transportation (GDOT) – Operations and Planning departments, various officials

- The studio met with several members of GDOT’s Planning department. We specifically asked for GDOT’s opinion on some of our transportation concepts (e.g. lowering speed limits, road diets, restriping, etc.). Overall, their reaction was summed up by saying that virtually any design changes would be permitted as long as a road’s throughput was not affected. They clarified GDOT is not responsible for any sidewalks along their routes.
- GDOT also informed us that a new crosswalk was being considered along Memorial Drive near East Lake School. For other crosswalk improvements the best way forward is to build community support in the form of a coalition, getting letters written, etc.: the louder the noise, the greater the likelihood they would see results.

Metropolitan Atlanta Rapid Transit Authority (MARTA) -- Kelly Hayden, Manager of Service Planning and Scheduling, and Jason Ward, Manager of Joint Development

- Hayden’s meeting concerned the corridor operational analysis conducted for MARTA by Parsons Brinkerhoff. She discussed idea of determining how much of our study area has new GSU students living in it, and whether they should be included in the study. If density were higher, Memorial Drive could be a candidate for a streetcar. Another way speeds can be lowered is by adjusting signal times, without changing actual speed limit. MARTA advised against bike lines along bus corridors for safety concerns. They are in favor of reversible lanes as a way to

increase a road’s volume without increasing capacity. Hayden explained that they do not manage their bus shelters, but high traffic generally encourages them to be built.

- In a separate phone call with Jason Ward, the studio asked about MARTA’s transit oriented development (TOD) along the corridor. MARTA is ground-leasing to Walton for the development of the King Memorial station TOD. There are no parking replacement requirements. MARTA has required a minimum of 20% affordable housing. They have settled on affordable senior housing so it could be done as a separate building, which worked much better for the site configuration. Walton won the selection process because they had the highest projected revenues from the ground lease since their development was the densest. King Memorial TOD will hopefully set the example for TOD in other areas of the city. They have learned a lot of lessons from Lindbergh.

Private sector entities

Carter/HGOR -- Various officials

- The studio heard much about the possible Carter-GSU development on the Turner Field site. Also, HGOR landscaped Liberty Plaza and drew up plans for a roundabout at Capitol Avenue and Memorial Drive. They confirmed that there are plans for the judicial complex to move into the Archives building and that funds have been approved for it. The roundabout has not been funded but is in the planning stages. It would save money on the signal timing maintenance. In

addition, to setting the tone for the entrance to the Memorial Corridor, and would truly cement the idea of Memorial as a distinguished street.

Integral -- Valerie Edwards, Executive Vice President, Development Division

- Integral owns a key property along what was once to be the Memorial Drive Capitol Greenway, just north of Capitol Gateway Apartments which Integral also owns. Edwards explained that Integral is definitely interested in developing the property in question, especially if the adjacent State Archives site will be taken out of play by the judicial complex. With its proximity to GSU, they would like to build housing for students, and more specifically, a "40% public housing, 20% tax credit, and 40% market rate" allotment. She explained the details of what goes in to building affordable units and the issues regarding mixed-use development and lenders. She believes this portion of Memorial is in serious need of retail, something Integral's development plans to capture. Integral plans to develop the site incrementally over the next 7-8 years.

Atlanta Gas Light (AGL) -- MarSay Simpson, Director of Regional Community Relations and Economic Development

- The studio asked about the possible plans for a new office location at the Atlantic Shopping Center. He said that AGL is evaluating sites for a new service center that would include many additional jobs and a training facility. AGL has taken a look at that property as a possible location, and they are

considering several other properties, as well. No plans have been finalized for a location, so that property is still very much in play.

Nextran -- Terry Barrows, Vice President & General Manager

- Barrows explained how Nextran's property was rezoned a few years ago, which increased the density that was possible and increased demand for another type of use. Currently their property is under contract. Nextran negotiated a 2-4 year lease back clause, so they will have a chance to find another location and will not be leaving in the immediate term. The in-town location is not ideal for their business anymore. Trucks have gotten bigger in the last few years and their customers are often outside the perimeter. They have 60 employees, and none of them live within a 10-mile radius of the location. They will likely relocate outside the perimeter.

Cabbagetown small business owner and developer -- Ron Fisher

- Ron owns a building on Carol Street and has converted it to loft offices. He is planning a coffee shop in the old Cube building. He explained several of the regulations that he has to consider as he plans his site and some of the differences between Cabbagetown's regulations as compared to the regulations across Memorial Drive.

Nonprofits

PATH Foundation -- Ed McBrayer, Executive Director

- Discussed Studio's connectivity plan with professionals to obtain their input. The PATH foundation only has two trails in that area that are already done: the trolley trail going to Gilliam Park and the ongoing Battle of Atlanta Trail along Sugar Creek north of I-20. They do not have anything else planned for the moment in this area. PATH foundation seemed happy with studio's proposed plan. Meeting ended with discussion of the PATH foundation way of getting funding and what alliances they make to get funding for their trails.

Trees Atlanta -- Jim Urban, Landscape Architect

- The studio was walked through several considerations which must be taken into account with urban tree planting and maintaining (e.g. distance from curb for visibility, distance from fire hydrants, distance from stop signs, height restrictions where there are power lines, etc.). Utilities are always a challenge, and it will be particularly difficult on Memorial because of all the curb cuts. As Trees Atlanta looks at Memorial, they may want to prioritize one side of the road for bigger trees -- whichever side has more space and is not under as many power lines. Regarding costs, without changing the soil it would be \$400-450 per tree. If the sidewalk must saw-cut, it's generally \$5/SF to remove concrete, then the well cut and soil, so that is generally about \$1,000 total per tree.

Invest Atlanta -- Chris Leutzinger, Real Estate Development Specialist, and Kent Spencer, Manager of Business Retention and Expansion

- Leutzinger discussed the status of the Eastside Tax Allocation District (TAD). Currently, the Eastside TAD has about \$50 million of increment in it, but there is an unofficial freeze on TAD spending throughout the city while the dispute between Atlanta BeltLine, Inc. and Atlanta Public Schools is worked out. There was some political discussion over the summer about shutting down the Eastside TAD, in part because it is structured differently than other Atlanta TADs. It could be cashed out completely and put toward other parts of the budget. But that effort was pushed back and it doesn't appear to be an issue now.
- Once the BeltLine/APS issue is resolved, Eastside TAD funds could be spent along the Memorial Drive corridor. There is not an official list of projects and priorities, but a broad priority remains acquiring land for the Memorial Greenway plan to create a mall stretching from Oakland Cemetery to the State Capitol. Other areas for spending could be for small businesses, streetcar, parking in the Sweet Auburn district, and historical preservation.
- Spencer said Invest Atlanta is in touch with several businesses along Memorial Corridor, most notably Leggett & Platt. They are doing their best to try to understand the needs of those businesses, but the land values are climbing too fast for IA to be able to compete with equivalent financial incentives. Spencer's contact at Leggett & Platt has said that the company

would like to keep their in-town location. They have a mix of hourly and salaried workers there, totaling 150 employees. Over 40% of the hourly employees live in the area and many walk to work. They are interested in additional transit options and pedestrian infrastructure. However, the final decision of whether to sell will come from their New York headquarters. If a sale were to happen, they would likely sell the land along with the business, which is a Leggett & Platt subsidiary called Masterrack.

V. MARKET FEASIBILITY ANALYSIS

Introduction

Memorial Drive, especially west of Moreland Avenue, has seen a boom in acquisition and construction in the last three years, with multiple multifamily and mixed-use projects planned. This growth has been catalyzed by the Atlanta BeltLine’s planned Eastside Trail extension from Irwin Street to Memorial, the recent rebound of the real estate cycle, and the founding of several charter schools along the corridor. The growth is shaping the demand for LCI travelway improvements.

Making population and employment projections even out to just five years during such a boom can be problematic and prone to significant amounts of error. Looking at current real estate trends provides a better sense of the revealed preferences for the volume and demographics of people who will want to live

and work in the area. Also, it is important to note the amount of capital flowing into the corridor. The total amount of public and private investment that has been programmed or dedicated to the corridor currently totals over \$100 million.

Memorial Drive has seen a flood of new mixed-use developments, some under construction and some in planning, which will drive demand for biking and walking. Residents have echoed the need for pedestrian and biking infrastructure in every NPU and neighborhood meeting. A young girl was hit by a car crossing Memorial Drive trying to walk to school in October 2014. Currently, almost anyone who needs to traverse Memorial Drive with access to a car will choose to drive. By providing infrastructure for walking trips and transit and by decreasing traffic speed to support pedestrian environment, residents and visitors will have multiple options for travel. By giving travelers choices, the number of single-occupancy vehicle trips will go down and alleviate traffic pressure.

The rapid land use changes will continue to happen with or without the LCI transportation infrastructure intervention. However, the LCI has the potential to change the direction of future growth towards a more sustainable model.

Land Use, Zoning and Urban Design

The City’s future land use plan and zoning maps generally support the LCI study’s overall development and transportation

strategies. In broad terms, the length of Memorial west of Moreland Avenue is developing and redeveloping in a mixed-use, mixed-density fashion. The study anticipates and supports this incremental transformation. The study recommends caution in over-responding to the current boom in higher-end residential and retail development, out of concern that rising land costs and taxes could threaten the economic stability of the neighborhoods.

Just east of Moreland, the study notes new multifamily development activity. Farther to the east, the use, character, and zoning patterns are relatively stable, supporting single-family housing with occasional multifamily complexes and small, neighborhood-serving retail sites. In this part of the corridor, the study supports maintaining the future land use and accompanying zoning, with possible exceptions noted below.

The study's proposed transportation improvements along Memorial will support a modest and incremental increase in development activity and will do so in a manner that improves both access to destinations and the quality and character of the travel experience. Any major acceleration of new development or redevelopment, on the other hand, should not be encouraged unless and until significant new transit or other mode capacity is implemented.

A number of natural assets exist along the corridor that could contribute to a continuity of greenspace, watershed protection and recreational opportunities. Environmentally

oriented citizens and neighborhoods are already investigating ways to build on the strengths of existing green infrastructure. Future land use changes might be contemplated to support these initiatives by designating conservation easements or purchased lands as open space.

Within this general context, the study recommends the following:

- **Affordable Housing:** Noting that affordable housing is an LCI and City policy priority, the inclusion of affordable units should be considered by NPU and city planning officials in the development of both public land and on some privately owned parcels requiring rezoning for development. MARTA has a useful precedent in requiring all future development on its properties to have 20% affordable units.
- **Job Creation:** Similarly, requirements related to hiring low-income individuals (including job training) to work on development projects should accompany disposition of land and future zoning requests.
- **Protecting Existing Jobs:** As land prices rise, employment centers are an important component of the corridor under threat of turnover. Besides existing retention incentives from Invest Atlanta, consider low-cost loans or grants for aesthetic improvements to commercial/industrial properties to make them more compatible with new residents.
- **Avoiding Premature Rezoning:** Rezoning for future development should be withheld until it's likely to happen. For example, the existing MRC 3-C zoning categories immediately west of Moreland Avenue are so permissive with respect to

density and use that the city may have already “given away the store.” The ability for the city or the community to adjust, refine, or reshape development to meet changing values has been ceded to the property owner, raising land costs and limiting inclusion of social values in future development.

- Urban Design: The proposed travel way modifications offer a grand opportunity to recast the character and quality of the Drive. That could more accessible and attractive neighborhood-serving nodes along the way. Where appropriate. change zoning classifications from the old C-1 and C-2 to the corresponding MRC and/or NC classifications to encourage more pedestrian-friendly, community-serving uses. Note that these changes should not increase developable densities but only assure better sidewalk and street frontages.

Key Segments of the Corridor:

The following section analyzes development on the corridor by dividing it into four key segments: 1) Capitol Avenue to Boulevard; 2) Boulevard to Moreland Avenue; 3) Moreland Avenue to Warren Street; and 4) Warren Street to Candler Road.

Memorial Drive Segment 1: Capitol Avenue to Boulevard

Key Issues:

- New affordable housing development is limited to the MARTA TOD site
- Lack of services, especially access to nutrition

- The Capitol Greenway project may be superseded by development opportunities

Key Opportunities:

- Underutilized and vacant commercial land near Boulevard may provide additional retail and commercial opportunities
- Activating the existing parcels of land for the Capitol Greenway would provide immediate benefits to existing and future neighbors

Key Properties in Transition:

ROUNDAABOUT

- Status: Planning
- Designer: HGOR

LIBERTY PLAZA

- Developer: Georgia Building Authority with HGOR as designer
- Status: Under construction, due 2014
- Deliverable: Greenspace for public assembly of up to 4500 people

GA SUPREME COURT

- Status: Planning underway

UNDEVELOPED AHA LAND (DORMANT GREENWAY)

- Developer: Integral Communities
- Status: Planning
- Deliverable: 600 residential units

GATEWAY PHASES III & IV

- Developer: Integral
- Status: Planning

CAPITOL AVENUE TO BOULEVARD



Figure 1: Detail map of transitional real estate from Capitol Avenue to Boulevard

New state projects offer more connectivity to Memorial Drive. The Memorial Greenway project has slowed for lack of funds to acquire parcels, but remains long-term vision. Existing and future multifamily developments could support more retail. MARTA TOD site will drive a stronger connection to King Memorial station.

- Deliverable: Residential units, number unknown

THE LEONARD

- Developer: Urban Realty Partners
- Status: Under construction, due 2014
- Deliverable: 94 residential units with 6000 sf retail

MARTA KING MEMORIAL TOD

- Developer: Walton Communities
- Status: Applied for Low Income Housing Tax Credits, due 2016
- Deliverable: 386 residential units with 13,000sf retail

FORMER HABITAT FOR HUMANITY BUILDINGS

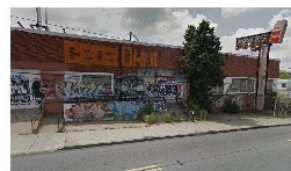
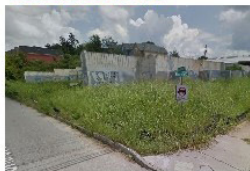
- Developer: Paces Properties
- Status: Under Contract

Invest Atlanta has been working for over a decade to acquire the parcels just north of Memorial Drive from Capitol Avenue to Oakland Cemetery for the Capital Greenway, a linear park that includes a cap over the interstate. This project has been under-funded because of competing city priorities. Integral, a member of the development partnership that built the Capitol Gateway project under Hope VI, has an option to develop several of the parcels. Integral is moving forward with these plans. If the City wishes to maintain these parcels for the Capital Greenway, the expected zoning change request should be conditioned on provisions for Integral to provide public access and trail connectivity through their development site. Also, the existing Capital Greenway parcels should be activated with landscaping and interim trails to encourage use by current and future residents

in that area. There are also plans to tear down the State Archives building, currently sinking on a weak foundation, to build a new location for the Georgia Supreme Court. In conjunction with this big construction project and the new Liberty Plaza, the Georgia State Building Authority has commissioned plans for the creation of a pedestrian-oriented roundabout at the intersection of Capitol Avenue and Memorial Drive. These plans are years away from execution, but the roundabout would help connectivity and provide an impressive grand entrance to both Memorial Drive and the Georgia Capitol.

The MARTA TOD planned for 2016 and the Leonard which completes construction this month will deliver a total of 482 new apartments in that area with about 20,000 square feet of retail. The future residents will increase the existing demand for services like grocery stores as well as pedestrian infrastructure improvements. Even with the new residential spaces and the future sale of the old Habitat for Humanity building, this segment of Memorial Drive has many more opportunities for development and transition. The areas around the Leonard and near Boulevard are vacant and underused. Grant Park is starting a “Living Memorial!” campaign to help attract more retail and commercial tenants to the corridor. The transportation, streetscape, and walkability improvements that the LCI proposes should serve to complement the goals of that campaign.

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNR/Airbus DS, USDA, USGS, AeroGRID, IGN, IGP, WorldView, and the GIS User Community



Heavy morning congestion is an issue at Boulevard, but corner parcels are underused. The next extension of the Atlanta BeltLine Eastside Trail is driving major interest in dense development. Affordability and displacement of jobs will be lingering equity problems. A major retail center is coming to Glenwood Park, south of I-20.

Memorial Drive Segment 2: From Boulevard to Moreland Avenue

Key Issues:

- The streetscape and site design is not conducive to pedestrian traffic, e.g. large chain link and barbed wire fences line Memorial Drive
- No affordability requirements and the BeltLine does not currently have funding for planned affordable units
- Cabbagetown Historic District rules limit redevelopment opportunities, largely because of minimum parking requirements
- Mixed-use development opportunities threaten industrial employment centers

Key Opportunities:

- Adopt compatible urban design and streetscape measures to reduce conflicts between pedestrians and motorists
- Coordinate development access with travel improvement; consistent streetscape treatments deriving from street width reductions
- Maintain job centers on Memorial and fund aesthetic improvements for industrial uses
- Encourage creative design of the new City water storage tank at the Holtzclaw site (Note: A design competition is now planned).
- Consider using city-owned property west of Bill Kennedy Way for shared parking to support surrounding development

Key Properties in Transition:

CABBAGETOWN CHARRETTE SITE

- Status: Seeking Public Support

THE CUBE (COFFEE SHOP)

- Developer: Ron Fisher
- Status: Purchased

- Deliverable: 1000 sf coffee shop and rain garden

EXISTING TOWNHOME FOUNDATIONS

- Status: Under contract; new foundations likely needed.

FUTURE WONDERROOT

- Designer: Perkins + Will
- Status: Construction, due 2015
- Deliverable: 54,000 sf of artists' studio and meeting space in historic school

ATLANTA DAIRIES

- Developer: Paces Properties
- Status: Under contract; scale and number of units unknown

BOLLWERK RESIDENTIAL

- Developer: Enfold Properties
- Status: Permitting building expansion

FUTURE TOWNHOMES

- Developer: John Wieland Homes
- Status: Under contract

LOFTS AT REYNOLDSTOWN CROSSING PHASE II

- Developer: Atlanta BeltLine, Inc. will put it to bid
- Status: Planning, but unfunded

WATERSHED SITE

- Developer: Department of Watershed Management
- Status: Planning new water storage tank, hosting design competition for appearance

NEXTRAN SITE

- Status: Recently sold, dealership plans to relocate in 2-3 years.

This segment of the corridor is the most in flux, in part catalyzed by the planned extension of the Atlanta BeltLine's Eastside Trail from Irwin Street to Memorial Drive. Several adaptive-reuse projects are complete or planned: Habitat for Humanity renovated the Pittsburgh Plate Glass Building from the 1950s; WonderRoot is adapting the former Tech High charter school building from the 1920s; and Paces Properties plans to

MORELAND AVENUE TO WARREN STREET

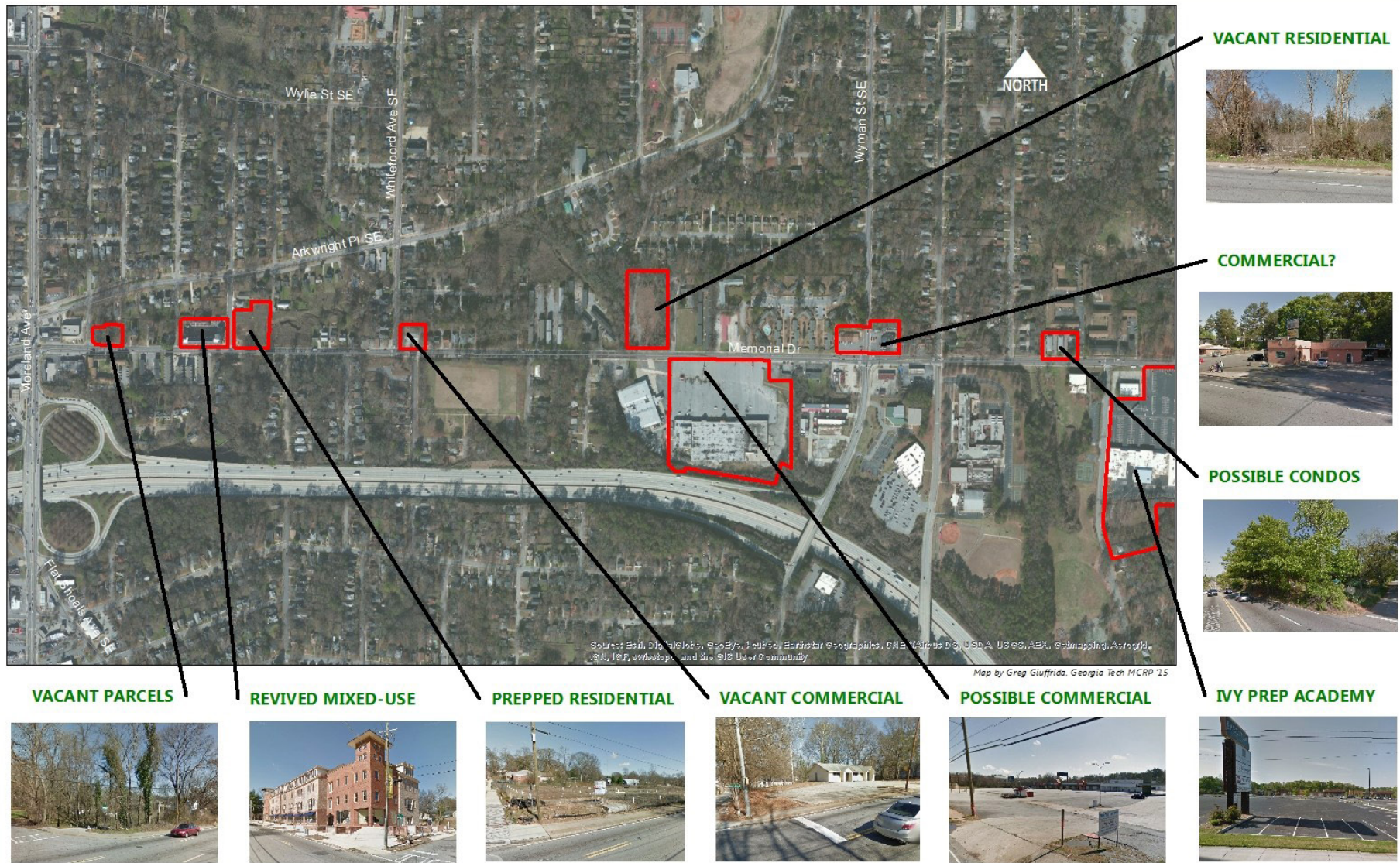


Figure 3: Detail map of transitional real estate from Moreland Avenue to Warren Street

The problematic intersection at Moreland/Arkwright will be redesigned. Stalled residential developments are being revived in southern Edgewood. The Atlantic shopping center site and Ivy Prep Charter sites offer potential for development that better engages the street. Safer pedestrian facilities for students are vital.

develop the Atlanta Dairies site while maintaining its historic 1940s character. On a smaller scale, a local Cabbagetown business owner plans to turn the Cube art gallery into a coffee shop. Several new residential developments are planned, including Lofts at Reynoldstown Crossing Phase II, a multifamily development next to the existing Lofts condos, and a new townhouse development east of the Leggett & Platt site.

Parking needs are expected to increase in coming years. One possibility for expanding parking is on city-owned land near I-20 and Old Flat Shoals for parking to serve new developments and BeltLine visitors.

Given the demand for residential mixed-use development, commercial uses in this segment of the corridor are at risk. Some Cabbagetown neighbors are frustrated by the industrial land uses. There is an effort led by some Cabbagetown residents to redevelop the block that is currently home to Cummins Landscape Supply, extra Grady ambulance space, and an underused warehouse. The neighbors involved would like to see active greenspace with mixed use development. Given the rising land prices, they may be outpaced by developers to bid on the property. However, the economic vitality of the corridor depends on a mix of jobs and residences as well as greenspace.

One of the biggest concerns from neighbors about industrial land uses is the fact that they do not relate to the pedestrian scale characteristic of residential neighborhoods. The tracts and buildings are large, with chain link fences protecting huge trucks and equipment. The aesthetic incongruity that industrial land creates in a neighborhood can be addressed with better design. For employers wishing to stay in the neighborhood, Invest Atlanta should consider engaging designers for landscaping design interventions. Hedges or wrought-iron fences instead

of chain link could enhance the pedestrian infrastructure improvements proposed for this LCI.

Another opportunity for design comes with the City Department of Watershed Management's plans for a new water storage tank on its parcel on Holtzclaw Street. The high elevation of the site above the BeltLine offers an impressive skyline view. Councilmember Archibong's office and the department have organized a design competition to solicit ideas for aesthetic appearance of the tank and the surrounding site.

Memorial Drive Segment 3: From Moreland Avenue to Warren Street

Key Issues:

- Vacant and underused land
- Limited connectivity of developments to neighborhoods and pedestrian experience
- Declining commercial uses

Key Opportunities:

- Potential for new urban design along adjacent land, especially at vacant or underused shopping centers.
- Allow incremental development along Memorial Drive to transform vacant properties while maintaining the stability of the occupied multifamily housing developments
- Encourage commercial redevelopment along the corridor to enhance job opportunities

Key Properties in Transition:

REVIVED MIXED USE

- Status: Recently opened for leasing

PREPPED SITE

- Status: Appears to be ready for redevelopment

WARREN STREET TO CANDLER ROAD - FOCUS ON COTTAGE GROVE POTENTIAL

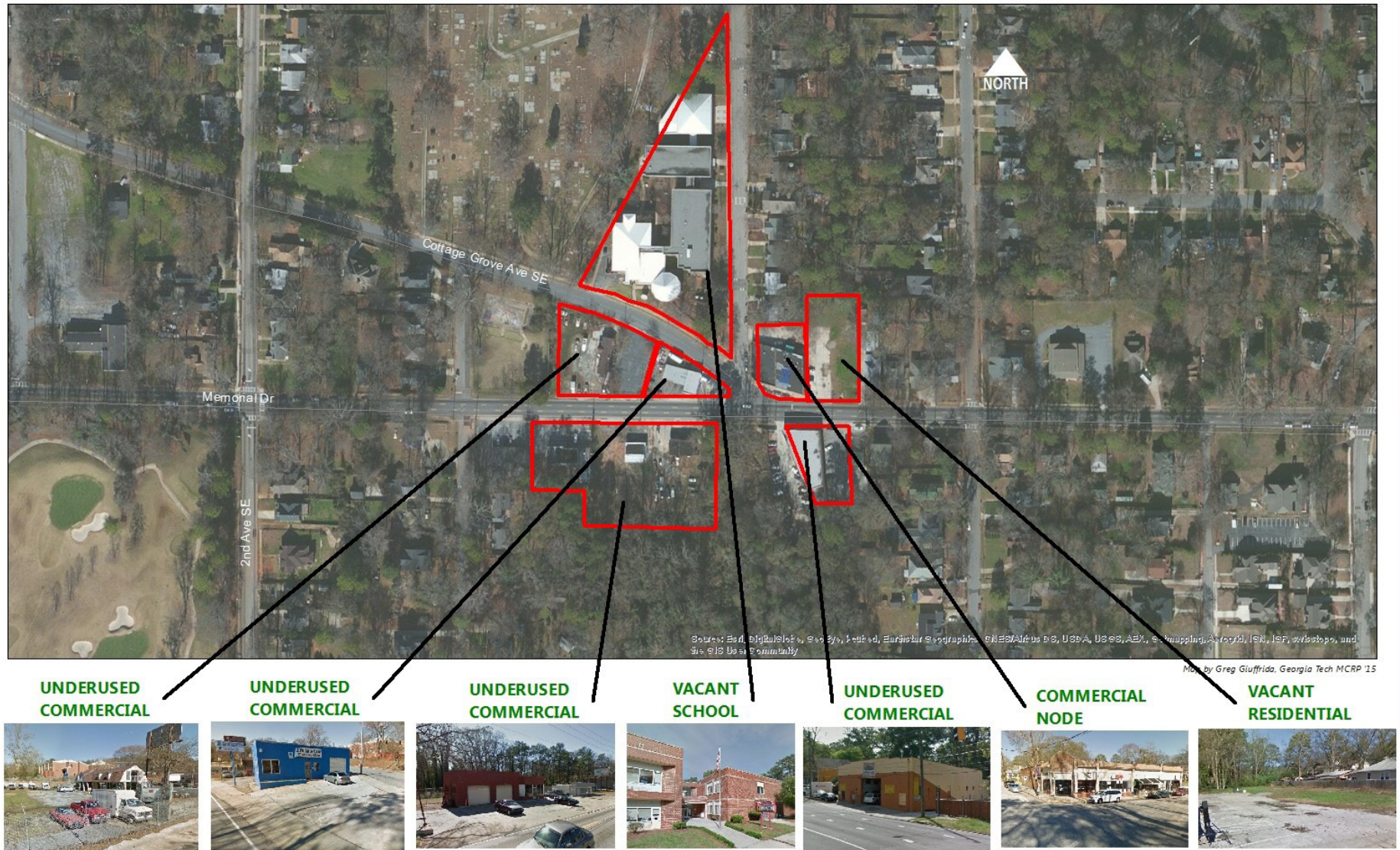


Figure 4: Detail map of transitional real estate at Cottage Grove

The current intersection design is inefficient and dangerous because of limited sight lines. A new design could improve safety, throughput, and activate a new space in front of the historic commercial block (details on pp. 57-59). The vacant school could be repurposed for community activities.

POSSIBLE COMMERCIAL: ATLANTIC SHOPPING CENTER

- Status: For sale by Vision Properties

POSSIBLE CONDOS: ROSEDALE APARTMENT COMPLEX

- Developer: Aletheia Ventures
- Status: Under contract, requesting permits

IVY PREPARATORY ACADEMY

- Status: Purchased, planning expansion

This segment has seen far less redevelopment in recent years, but it's ripe for transition. One recently completed project is a mixed-use residential development with some ground-floor retail, located at Dahlgren Street. Next door is a Planned Unit Development for 18 units with utility work already completed. Several other underused and vacant properties surround those developments as well as multifamily housing that is significantly more affordable than new construction.

The two largest sites in this section of the corridor are also undergoing changes. The Atlantic Shopping Center is currently for sale. As a retail location, it has declined over the years and has very low occupancy. The location and size of the site may lend itself to other uses. For example, this site is one of the few places along the corridor that could accommodate a new corporate complex which would ideally provide more jobs and improve the economic vitality of the corridor. The large parking lot could be reconfigured to house buildings closer to the street level. The buried creek underneath could be uncovered. But there is concern about its location in a floodplain, which could limit redevelopment. Another site with a similarly large footprint and plenty of underused surface parking is the Ivy Preparatory Academy, located between Wilkinson and Warren Streets. The school was formerly a tenant in the space, but recently worked with the DeKalb County Development Authority to use bond-financing to acquire the property. Expansion plans include building out 15,000

additional square feet for the school in the existing building, and the complex includes hundreds of unused parking spaces which could provide other interesting possibilities for future use. The school's board is considering future expansion plans, but nothing is imminent. It could consider selling or ground leasing a portion of the site nearest to Memorial Drive, currently unused parking, to a developer. Coupled with the travelway and streetscape enhancements from the LCI, a development closer to the road would help to visibly define the corridor, connect the development to the neighborhood, and enhance the pedestrian experience.

Memorial Drive Segment 4: From Warren Street to Candler Avenue

Key Issues:

- Development pressures from the western part of the corridor may creep into the neighborhood and undermine its existing residential character
- Creek buffer zones limit redevelopment potential
- The commercial node at Cottage Grove Avenue is underused
- Current intersection alignment has poor visibility and functionality

Key Opportunities:

- The creek buffer zones form a natural resource of local flora and fauna--these ecologically rich areas could be potentially recaptured as greenspace for the area
- With the proposed LCI improvements to Cottage Grove Avenue intersection, the declining retail outpost has the potential to reinvent itself as a thriving commercial node

Key Parcels in Transition:

FORMER EAST LAKE SCHOOL:

- Status: Closed

COTTAGE GROVE BUSINESS SITES:

- Status: Many are underutilized

This segment of the corridor is predominantly single-family homes. The proposed travelway and streetscape improvements would promote walking trips and allow children to more easily walk to school.

The intersection of Memorial Drive and Cottage Grove Avenue has great bones as a neighborhood commercial hub; it could become as much of an attraction as Downtown Kirkwood to the northwest. The LCI plans call for a narrowing of Memorial Drive that would devote more curb space near the existing coffee shop and salon. This area could become a bus shelter or potentially outdoor seating space for the coffee shop (A concept is contained in the intersection designs later). The LCI would also improve walkability of the area by constructing functioning sidewalks and crosswalks. However, the intersection will still need more planning to address the vacant land, empty school, and the challenge of redeveloping land along the creek bed to the south of the intersection. There should be a visioning effort between the neighbors, city officials, and property owners to determine the future possibilities of Cottage Grove.

Other than the Cottage Grove Avenue intersection, commercial development should be curtailed along this part of the corridor so that residents of single family homes along the corridor will not be displaced. Higher-density zoning should be avoided.

Trees and plants have lots of room to grow in this older residential part of the corridor, and they are a key natural resource that should be preserved. Atlanta is one of the most biodiverse cities in the US, and this area of the city, with myriad creeks that are protected with buffers provides a fantastic habitat. Native

species like White Oaks, some approaching 200 years old, thrive here. Many parcels in this part of the corridor along the creeks could function as usable greenspace if it weren't for invasive species like kudzo, English ivy, and privet which kill the native plants and make the areas look like an unnavigable jungle instead of a forest.

These creek buffer areas are a prime example of the potential for new usable greenspace through ecorestoration. Ecorestoration is a process of eradicating invasive species to allow native plants a chance to revive. Ecorestoration is most successful in areas where the soil has never been graded or chemically altered and still hosts indigenous seeds, bacteria, and fungi that support of the native ecosystem. The parcels with undisturbed soil are likely too small for conservation easements, but by working with naturalists and volunteer groups, the property owners may be educated on the possibilities for ecorestoration of their land. There are also opportunities for the City to set an example on some of their properties. For example Public Works could restore the creek at East Lake Park to a natural creek bed instead of concrete, and Watershed Management could restore their site at Willow Wood Circle, currently overrun by privet, to an urban forest.

Conclusion

The transportation improvements in this LCI are designed to complement the current real estate and land use trends in each of the four segments, and together they will catalyze future possibilities for the corridor. In the high-growth areas of the corridor at risk for more congestion, the streetscape improvements will increase walkability and decrease the number of trips taken by car. Increased street life will drive demand for new retail in mixed-use developments. In the lower-density areas, the streetscape improvements will increase neighborhood connectivity and spark

neighborhood and private developers' interest in reimagining the commercial nodes and intersections. The investment in the livability and access to the Memorial Drive corridor will hopefully attract new job centers and kickstart grassroots neighborhood efforts like eco restoration, as well.

5-Year Housing Strategy

Introduction

Affordability will continue to be an issue along the length of the Memorial Drive corridor, as popularity of Eastside in-town neighborhoods grows with the Atlanta BeltLine and other amenities around it. In short, it will be a displacement and supply problem. Rising home values are already leading some long-time residents to leave the area, whether by choice or inability to keep up with property tax increases. On the supply side, much of the new residential development is not affordable, or the number of affordable units is not high enough to supply the needs of residents at all incomes. To the east, there is a large stock of existing affordable properties, mostly in the form of older single-family homes and garden apartments. But there is increasing price pressure from the Kirkwood and Oakhurst neighborhoods and around the Drew Charter School.

A sound five-year housing strategy for the study area will consider the following areas, of equal importance:

- Affordability
- Economic diversity
- Job-housing match
- Aging in place
- Efficient use of transportation facilities

Based on these priorities, this 5-year strategy contains the following tactics:

- A) Helping existing residents stay in their homes if they choose
- B) Preserving and improving the existing stock of affordable options (both subsidized and market-rate)
- C) Promoting the development of new affordable unit
- D) Promoting development that takes advantage of transit and other alternative modes, as well as jobs-housing match
- E) Promoting infrastructure and services that allow elderly residents to remain in their homes and active members of their communities

Existing Conditions

The LCI study area encompasses a diverse range of people, employment and incomes, housing types, market activity, and needs for the future. The following demographic analysis uses the same Census tracts as those in the background report. Unless otherwise specified, the housing data below come from the American Community Survey 2008-2012 Five-Year Estimates. It's important to note that some of the Census tracts stretch farther away from the corridor than others, but the overall conditions across each tract don't vary greatly.

Some key findings on the study area compared to the City of Atlanta (details in Table 1):

Housing composition and density

- More owner-occupied units (56% to 46%)
- More single-family detached units (57.7% to 40%)
- Fewer large multifamily properties (10.3% to 21.5%)
- Broadly, multifamily and denser single-family housing is located in the western half of the study area, while the eastern half is

largely single-family housing, with a few multifamily sections directly on Memorial Drive.

Affordability

- Slightly lower median value of owner-occupied homes (\$215,000 to \$223,000)
- Nearly equal gross rent and rent as percentage of income (\$940 to \$945; 32.8% to 32%)
- Slightly higher number of renters paying more than 50% of income to rent (28.8% to 27.6%)

Transportation

- Roughly equivalent commuters who drive alone (67.7% to 66.9%)
- Slightly higher numbers of commuters who carpool and bicycle (10.2% to 8%; 1.5% to 0.8%)

Aging in Place

- A slightly higher median age than the city (35.7 to 33.2), but fewer residents over the age of 55 (17.9% to 19.4%)

FIGURE 5: Comparison of key housing figures for the study area and City of Atlanta

| | Total Study Area | % of Study Area | City of Atlanta |
|---|------------------|-----------------|-----------------|
| Population | 40,268 | | 425,931 |
| Total housing units | 21,196 | | 224,615 |
| Owner-occupied | 9,983 | 56.0% | 46% |
| Renter-occupied | 7,836 | 44.0% | 54% |
| Housing type | | | |
| Single-family, detached | 12,236 | 57.7% | 40% |
| 2 to 9 units | 3,264 | 15.5% | 16% |
| 10 to 49 units | 2,269 | 10.7% | 16.8% |
| 50 or more | 2,172 | 10.3% | 21.5% |
| Median Value of Owner-occupied Properties | \$215,299 | | \$223,121 |
| Median Gross Rent | \$940 | | \$945 |
| Median Gross Rent as % of Household Income | | 32.8% | 32% |
| Units paying 50%+ of income to rent | 2,255 | 28.8% | 27.6% |
| Monthly Owner Costs as % of Household Income | | | |
| Less than 30% | 4,794 | 59.9% | 59.3% |
| 30% or more | 3,046 | 38% | 39.8% |
| 50% or more | 1,521 | 19.0% | 17.9% |
| Means of Transportation to Work | | | |
| Drive alone | 13,704 | 67.7% | 66.9% |
| Carpool | 2,064 | 10.2% | 8.0% |
| Transit | 2,058 | 10.2% | 11.5% |
| Bicycle | 303 | 1.5% | 0.8% |
| Walk | 450 | 2.2% | 4.7% |
| Work at home | 1,357 | 6.7% | 6.9% |
| Average Commute Time to Work (min) | 28 | | 26 |
| Median Age (female/male) | 36.5/34.9 | | 33.8/32.5 |
| Residents over 55 | 7,210 | 17.9% | 19.4% |

Source: Social Explorer Tables: ACS 2008 to 2012 (5-Year Estimates) (SE), ACS 2008 -- 2012 (5-Year Estimates), Social Explorer; U.S. Census Bureau

HOUSING STRATEGY

A) HELP EXISTING RESIDENTS STAY IN THEIR HOMES IF THEY CHOOSE

The circumstances of longtime homeowners in the study area vary widely, but there are several common themes that have emerged from the Great Recession and the ongoing transformation of Atlanta's Eastside neighborhoods. This strategy aims to isolate the most pressing problems, identify possible remedies, and offer timelines, where possible.

Problem: Rising property taxes

| | |
|-----------------------|--|
| Remedy | "Circuit breaker" tax freezes, which freeze tax assessments at a given level whenever the property value of a home increases by too much in a given time period. Seniors already get a one-time tax freeze, but the concept could be applied to younger owners below a given income level. |
| Public Expense | To be determined |
| Difficulty | High political effort |
| Timeline | Likely 2-3 years for policy research, advocacy, passage by Council, County Commission |

Problem: Foreclosure

| | |
|-----------------------|---|
| Remedy | Connect homeowners with existing programs: <ul style="list-style-type: none">• HomeSafe Georgia, which administers \$339 million for foreclosure relief• HUD-approved housing counselors |
| Public Expense | Low to none |
| Difficulty | Low, requires outreach |
| Timeline | HomeSafe Georgia funds available through 2016 |

Problem: Major repairs, such as leaks and flooding

| | |
|-----------------------|---|
| Remedy | Connecting homeowners with existing programs, including: <ul style="list-style-type: none">• City of Atlanta's Limited Repairs Program offers seniors a grant of up to \$7,500 for eligible repairs, including HVAC, roof, plumbing, code violations. |
| Public Expense | Current CDBG allocation |
| Difficulty | Low, requires outreach |
| Timeline | Life of CDBG funding, which is limited and must be renewed through competitive process. |

Problem: Energy costs

| | |
|-----------------------|---|
| Remedy | Connecting homeowners with existing programs, including: <ul style="list-style-type: none">• Low-Income Home Energy Assistance Program (LIHEAP) for households below 60% of AMI• City's Limited Repairs Program offers seniors a grant of up to \$7,500 for eligible repairs, including HVAC, roof, plumbing, code violations.• Georgia Power rebates and incentives for efficient appliances; Whole House energy improvement program |
| Public Expense | FY 2014 LIHEAP distribution was \$61,000; 2015 allocation pending |
| Difficulty | Low, requires outreach |
| Timeline | Life of federal LIHEAP funding, which is limited and must be renewed by Congress |

HOUSING STRATEGY

B) PRESERVE AND IMPROVE EXISTING STOCK OF AFFORDABLE UNITS

Current land and development costs make it more expensive to approve and develop new affordable housing than to preserve, acquire, or renovate existing properties. An added benefit is keeping households in their communities. With this in mind, there are several promising models for protecting affordable units, both at market rates and with subsidy. Preserving some affordable market-rate units is important because of long waiting lists for rental vouchers and eligibility requirements that exclude some worthy residents.



Figure 6: Renovated market-rate garden apartments

While new affordable units should be promoted, another key part of an overall housing strategy is preserving rental housing that is affordable to working families at market rates. The apartments above are affordable to a household of three earning roughly 45% of the area median income (AMI). Source: Google Streetview; Georgia Housing Search, Feb. 2015.

Problem: Existing market-rate affordable multi-family properties at risk for redevelopment

| | |
|-----------------------|--|
| Remedy | Zoning: Consider affordability requirements in rezoning requests and site approvals that would change the underlying use and price point. |
| Public Expense | No explicit funding, but requires staff time, energy, political capital; Potential legal risk |
| Difficulty | Medium to High |
| Timeline | Ongoing: Depends on specific properties and market conditions |
| Remedy | Acquisition/rehab of existing multifamily properties with affordability requirements (Example: Trestletree Village) <ul style="list-style-type: none">• Low-Income Housing Tax Credit (LIHTC)• Tax-exempt bonds from Invest Atlanta |
| Public Expense | Statewide LIHTC allocation in 2014 was \$29.5M Tax-exempt bonds limited by IA capacity |
| Difficulty | High (LIHTC process is competitive with high application and compliance rules) |
| Timeline | Ongoing; Annual allocations of LIHTC funding set by population size |
| Remedy | Nonprofit investment in existing properties: <ul style="list-style-type: none">• Mercy Housing• Enterprise Community Dev. Partners |
| Public Expense | Medium to Low; Various public matching funds can be applied, depending on the project |
| Difficulty | High (LIHTC is competitive process with high application and compliance requirements) |
| Timeline | Ongoing; Can be useful tool for renovation during down-cycles of real estate market |

HOUSING STRATEGY

C) PROMOTE DEVELOPMENT OF NEW AFFORDABLE UNITS

The rebound of the metro Atlanta real estate market has seen dozens of large multifamily projects break ground in desirable parts of the city within walking distance of amenities and transit. Memorial Drive is no exception. Promoting the inclusion of affordable units in these new developments will ensure that the ongoing transformation of these neighborhoods is inclusive. There are several existing models.

Problem: Existing market-rate affordable multifamily properties at risk for redevelopment

| | |
|-----------------------|--|
| Remedy | For city-owned or –controlled land, put in place affordability requirements for any residential use, on top of subsidy programs. |
| Public Expense | Low; Requires staff time and effort; political capital |
| Difficulty | High political difficulty |
| Timeline | Ongoing; Depends on specific properties and market conditions; Potential litigation |
| Remedy | Nonprofit development, aided by public subsidy (Example: Reynoldstown Senior) <ul style="list-style-type: none">• Mercy Housing• BeltLine Affordable Housing Trust Fund (BAHTF) |
| Public Expense | Medium; Matching funds usually involved |
| Difficulty | Low politically, Medium administratively |
| Timeline | Ongoing; Depends on specific properties and market conditions; BATHF is currently depleted, next capitalization unknown. |

| | |
|-----------------------|--|
| Remedy | Land acquisition/sale/donation as subsidy for affordable development <ul style="list-style-type: none">• MARTA TOD program• Atlanta-Fulton Co. Land Bank Authority• Atlanta Land Trust Collaborative |
| Public Expense | Medium to Low; Various public matching funds can be applied, depending on the project |
| Difficulty | High (LIHTC is competitive process with high application and compliance requirements) |
| Timeline | Ongoing; Can be useful tool for renovation during down-cycles of real estate market |
| Remedy | Conventional subsidy tools <ul style="list-style-type: none">• Low-Income Housing Tax Credit• Invest Atlanta programs<ul style="list-style-type: none">• CHDO Grants• Housing Opportunity Bonds• Urban Enterprise Zone• HOME Multifamily financing• Tax-exempt bond financing |
| Public Expense | High, some immediate, some deferred debt |
| Difficulty | High |
| Timeline | Ongoing; funding sources fluctuate based on political climate, bonding capacity, etc. |

HOUSING STRATEGY

D) PROMOTING DEVELOPMENT NEAR TRANSIT AND OTHER MODES; SUPPORTING JOBS-HOUSING MATCH

Although the study area has some key employers that contribute to the Atlanta area's economic diversity, it is not currently a major job center. Local hiring by existing and future employers is encouraged. But a complete strategy for jobs-housing match will consider transit connections to greater Atlanta job markets. The best locations for multimodal accessibility include:

- On or near Memorial Drive, which is served by bus routes (74, 21) and crossing routes (32, 55, 186, 4, 34, 107, 15). One proposed route for BeltLine transit would use Memorial, from Grant St. to Bill Kennedy Way.
- Near the Atlanta BeltLine Eastside Trail extension, which will offer ped/bike access to Inman Park, Old 4th Ward, and Midtown. Another proposed BeltLine transit route would use this corridor.
- MARTA rail stations at Georgia State, King Memorial, and Inman Park/Reynoldstown. To the east, where MARTA rail is farther away from Memorial, focus on bus routes connecting to the rail system.

Problem: Promoting new Transit-Oriented Development (TOD)

| | |
|-----------------------|---|
| Remedy | Zoning for higher density near key transit stops and corridors. Example: <ul style="list-style-type: none">• MARTA TOD strategy• Atlanta BeltLine Subarea Master Plans |
| Public Expense | Low; Requires staff time and effort; political capital |
| Difficulty | Medium politically |
| Timeline | Ongoing; Depends on specific properties and market conditions |

| | |
|-----------------------|---|
| Remedy | Advocate for stronger priority given to TOD in existing affordable subsidy programs, such as: <ul style="list-style-type: none">• State Qualified Allocation Plan• Invest Atlanta development programs |
| Public Expense | Low; Requires staff time and effort; political capital |
| Difficulty | High administratively |
| Timeline | Long; Major changes to QAP process take time |



Figure 7: Rendering of proposed King Memorial TOD project

The King Memorial TOD project intends to build almost 400 apartments and retail space on an underused parking lot. Twenty percent of the units will be affordable for seniors. It's expected to reduce car trips, increase transit ridership, and contribute to jobs-housing match. Source: Atlanta Business Chronicle

HOUSING STRATEGY

E) PROMOTE HOUSING THAT ALLOWS SENIORS TO AGE IN PLACE

In many cases, the tactics outlined in the existing residents section (A) will help low-income seniors remain in their homes and communities. There are also options to keep seniors living in their communities even if their housing situation changes, such as shared housing, new senior development, and services for at-home care.

Problem: Accommodating seniors who want to stay in their communities

| | |
|-----------------------|---|
| Remedy | Shared housing with seniors in similar situations. Local service providers, neighborhood groups, and community leaders can help connect seniors with similar needs. Examples: <ul style="list-style-type: none">• Women for Living in Community• National Shared Housing Resource Center |
| Public Expense | Low; Some outreach and marketing required to connect residents to services and programs |
| Difficulty | Low |
| Timeline | Ongoing |

Problem: At-home care and services

| | |
|-----------------------|--|
| Remedy | Existing programs for nursing, cleaning, shopping, meal delivery, transportation. <ul style="list-style-type: none">• Fulton County Office of Aging• DeKalb County Senior Services• Various non-profit and church services |
| Public Expense | Medium to High |
| Difficulty | Low, outreach required |
| Timeline | Ongoing. Lifetimes of programs vary. |

Problem: Affordable housing for seniors

| | |
|-----------------------|---|
| Remedy | Develop new senior housing (low- or mixed-income) using existing subsidy models. (Example: Reynoldstown Senior) <ul style="list-style-type: none">• LIHTC• HUD 202 |
| Public Expense | High |
| Difficulty | Medium; Senior housing generally sees less opposition than mixed-income family housing. |
| Timeline | Ongoing; subject to competitive funding process, availability of federal funds. |

Problem: Home conversions for senior needs

| | |
|-----------------------|---|
| Remedy | Existing programs for wheelchair ramps, handrails, shelving, alarms, etc. <ul style="list-style-type: none">• Home Access Program, Georgia DCA• Credit-Able program for low-cost loans• HUD Title 1 Improvement Program |
| Public Expense | Low |
| Difficulty | Low, outreach required |
| Timeline | Ongoing. Lifetimes of programs vary. |

VI. ROADWAY AND INTERSECTION DESIGN

Scope

The state of Memorial Drive itself is dynamic. Spanning two counties, several communities and ranging in activity from the state Capitol to hundreds of single-family house driveways a few miles down the road, there are many considerations in mobility, safety and community.

To enhance the efficiency of Memorial Drive as a public good, the diverse corridor was reimagined with observation, public comment, and best practices of alternative design methods. The corresponding study is largely organized by key intersections, representing both transitions and access points. Three topics will be considered at each: reversible lanes, the “speed section” and roundabouts.

Reversible Lanes

Users repeatedly expressed safety concerns about reversible-lane configurations where the middle lane runs west during the morning peak and east during the remainder of the day. The corridor also changes between standard lanes and reversible lanes six times. The range of viewpoints at several public meetings showed that residents wanted Memorial Drive to keep its arterial function, yet increase the safety for pedestrians, cyclist and vehicles alike. Several alternative approaches were considered in an effort to satisfy both demands.

Because of Memorial Drive’s arterial function, reversible lanes actually serve the corridor well, despite concerns about safety. In effect, they double capacity during peak hours without the need to acquire additional right-of-way (ROW). For this reason,

the reversible lane could be an advantage to the surrounding businesses and neighborhoods if safety is addressed. Currently, there are several dangerous transitions from standard lanes to reversible lanes and insufficient signage and markers for drivers. If reversible lanes are made more consistent along the length of the corridor, travel will be more predictable and safer. Advances with in-road lighting and signage are now available. With a more consistent configuration and enhanced indication, driver comprehension will be increased and the functional advantages of reversible lanes can be utilized without constant fear of safety along the route. Specifics of the proposed changes to lane configurations will be detailed later with the intersections and roadway segment proposals. The final proposed configuration along the corridor can be compared with the current configuration along the corridor in Figures 2 and 3.

One possible enhancement of directional indication are supplementary surface level indicators that work in conjunction with the in-place overhead indicators. In-ground indication has had maintenance and functionality concerns in past projects but can be currently obtained with warranties that last up to five years and provide clear communication of variable barriers.



Figure 8:
In-road lighting
More reliable hardware for in-road lighting offers improved visibility in reversible lanes and crosswalks.

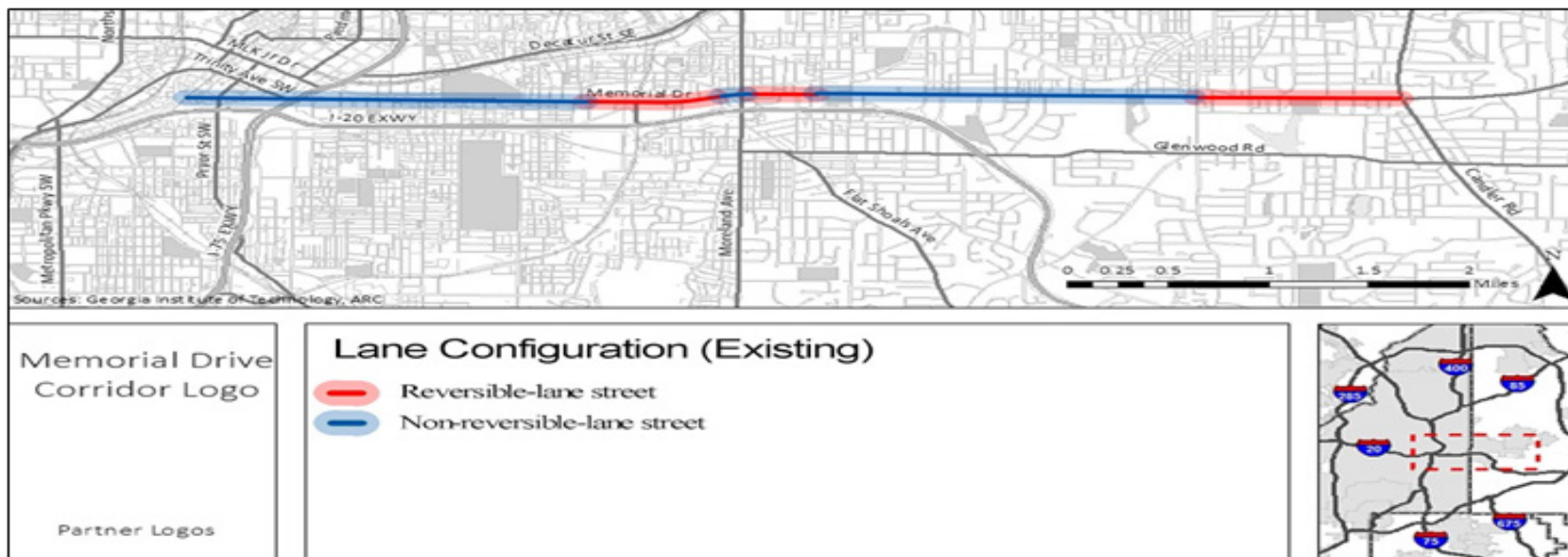


Figure 10:
Color-coded map of existing lane configuration
Some of the most dangerous portions of Memorial Drive are created by multiple, confusing transitions to and from reversible lanes. There are **five** of these transitions in the study area, each with inadequate signage and lines of sight.

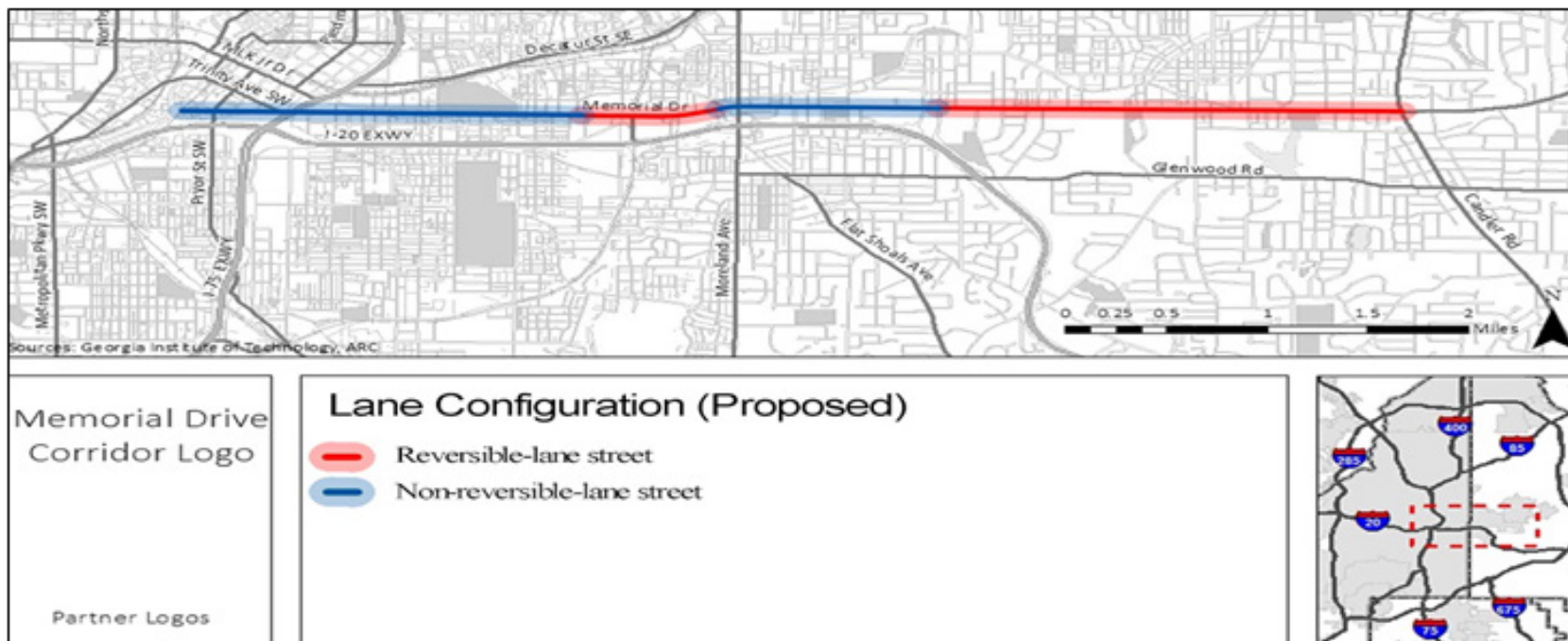


Figure 11:
Color-coded map of proposed lane configuration
There are some compelling reasons for keeping reversible lanes (see p. 37) if the transitions and signage are improved. This plan's proposed configuration would reduce these transitions to **three**.

The “Speed Section”

One area in which the advantages of the reversible lane could be best used are between the 2nd Ave and Clifton intersections. The authors’ observations and surrounding residents confirm that vehicles travel through here much faster than the posted speed limit, creating pedestrian safety concerns for the local YMCA and Drew Charter School. Within a short observation period, fewer than half of the vehicles were seen traveling within the posted speed limit and one-fifth were traveling faster than 50 mph. The cause of this can be attributed to several key factors, including access management, geometric design, and topography.

There are a total of two access points (driveways and entrances) along the south side of Memorial Drive from 2nd Ave westbound to Howard St, a distance of three quarters of a mile, whereas in the same distance east from 2nd Ave there are 26 access points. Although a high number of access points is not desirable on an arterial road, the contrast between this “speed section” and the dynamic along other sections of the corridor indicate a factor of speeding behavior. When drivers reach a segment of Memorial Drive where there are very few conflict points, they can drive fast and straight with little fear of conflict. The design and topography of this section also assist the ‘fast and straight’ condition as the roadway is horizontally linear with several dramatic changes in topography. With the speed gained on these hills and unimpeded straight direction, vehicles “naturally” speed up past the limit.

Combating Speed with Policy

There are two proposals for combating this particularly unsafe segment of Memorial Drive. The first is to reduce the posted speed limit to 25 mph. The reduction of speed limits has been

recently enacted in several areas throughout the country, most recently New York City, as a means to improve safety for all modes. Studies surrounding such policy changes have observed a higher throughput on congested roads with a lower speed limit. This principle was also cited in the argument for implementing the variable speed limit signs along I-285, reducing the posted limit during peak times to adjust the flow of traffic to a higher-capacity setting.

Two additional benefits of a reduced speed limit are pedestrian and vehicle safety. Studies show that the death rate more than doubles for pedestrians when speed increases from 25 to 35 mph. Figure 3 shows that a pedestrian hit by a car travelling 20 mph only has a 15% death rate, whereas that same collision with a car going 30 mph raises the death rate to 45%, and the number goes up significantly when the speed reaches 40 mph.

Figure 12:
Chart of vehicle speeds and likelihood of fatal injury for pedestrians
Lower design speeds carry many benefits, but the most vital is reducing the likelihood that a pedestrian hit by a car will die.
Source: UK Dept. of Transportation; NHTSA

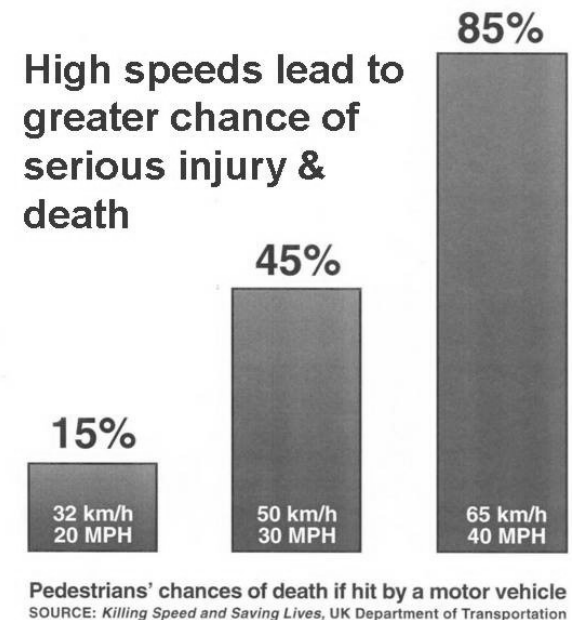


FIGURE 13: Projected changes at Memorial Drive/Boulevard intersection with speed limit change

| Throughput | | | | |
|-------------------------------|-------------|-----------------|--------------|-----------------|
| Current Speed Limit (35 mph) | | | | |
| | Stops (vph) | Fuel Used (gal) | Dilemma Veh. | Delay (sec/veh) |
| Eastbound | 191 | 4 | 5 | 43.5 |
| Westbound | 1,142 | 32 | 16 | 75.3 |
| Northbound | 1,000 | 34 | 24 | 58.4 |
| Southbound | 161 | 3 | 9 | 28.5 |
| Proposed Speed Limit (25 mph) | | | | |
| | Stops (vph) | Fuel Used (gal) | Dilemma Veh. | Delay (sec/veh) |
| Eastbound | 172 | 3 | 0 | 31.4 |
| Westbound | 610 | 28 | 0 | 75.7 |
| Northbound | 1,098 | 35 | 0 | 64.8 |
| Southbound | 161 | 3 | 0 | 28.5 |
| Projected Change | | | | |
| | Stops (vph) | Fuel Used (gal) | Dilemma Veh. | Delay (sec/veh) |
| Eastbound | -19 | -1 | -5 | -12 |
| Westbound | -532 | -4 | -16 | 0 |
| Northbound | 98 | 1 | -24 | 6 |
| Southbound | 0 | 0 | -9 | 0 |
| TOTAL CHANGE | -453 | -4 | -54 | -5 |

| Emissions (g/hr) | | | |
|-------------------------------|-------|-----|-----|
| Current Speed Limit (35 mph) | | | |
| | CO | NOx | VOC |
| Eastbound | 305 | 59 | 71 |
| Westbound | 2,231 | 434 | 517 |
| Northbound | 2,419 | 471 | 561 |
| Southbound | 253 | 49 | 58 |
| Proposed Speed Limit (25 mph) | | | |
| | CO | NOx | VOC |
| Eastbound | 219 | 43 | 51 |
| Westbound | 1,931 | 375 | 448 |
| Northbound | 2,445 | 475 | 567 |
| Southbound | 221 | 42 | 51 |
| Projected Change | | | |
| | CO | NOx | VOC |
| Eastbound | -86 | -16 | -20 |
| Westbound | -300 | -59 | -69 |
| Northbound | 26 | 4 | 6 |
| Southbound | -32 | -7 | -7 |
| TOTAL CHANGE | -392 | -78 | -90 |

Additionally, as a vehicle approaches an intersection that has just signaled a yellow light, the driver must make the decision to either stop or continue. At higher speeds, there is a space called the “dilemma zone,” requiring the driver to make an uncomfortable hard stop or accelerate very quickly in order to obey the traffic signal. The existence of these zones produces a safety risk. The number of vehicles projected to be within the dilemma zone of an intersection is one of the outputs of a Synchro model predicting changes that could be expected with a 25-mph speed limit. Some of the results of this model are included in Table 1. Although this represents only a snapshot, it should be noted that reducing the speed limit also results in reductions in emissions and improves throughput.

Combating Speed with Design

Another way to reduce unsafe speeds is through design measures. The primary proposal is to extend the reversible lane configuration that ends at 2nd Ave further westbound to the Clifton Street intersection. As mentioned previously, if transitions and visual elements are improved, reversible lanes hold a capacity power that is unique and beneficial. Besides reducing the needed right-of-way, the variable nature of the road encourages drivers to be more cautious. With the acquired space from subtracting a travel lane from the road, several traffic-calming measures can be implemented including those illustrated below:

- Bulb-outs at intersections to shorten crosswalk distances
- Midblock crosswalks and “neckdowns” with pedestrian signaling or signage
- Widened sidewalks
- Adding on-street parking where it can be useful
- Protective measures such as a fence line along the sidewalk for pedestrian safety

- Landscaping
- Enhanced lighting
- Adding horizontal curvature or ‘wiggling’ the roadwa

One of the design concerns with the present state of this speed section is that it is straight with few conflict points. By adding a slight horizontal curvature to the road, higher speeds become uncomfortable. Reducing the current four-lane road to a three lane reversible configuration will provide twelve feet of space to essentially ‘wiggle’ the path of the road slightly, as seen in Figure 6 so that only vehicles traveling significantly above the design speed of the road will feel any significant amount of discomfort.



Figure 15:

Illustration of design elements intended to reduce vehicle speed

Introducing new design elements like trees, bulb-outs, pedestrian crossings, and even on-street parking can have the combined effect of reducing how fast drivers can comfortably operate and creating a safer and more attractive environment for other users and adjacent businesses and residents.

Figure 16:
Illustration of proposed intersection design elements

Intersection bulb-outs reduce crosswalk distances for pedestrians, while reducing turning and straight-distance speeds of drivers.

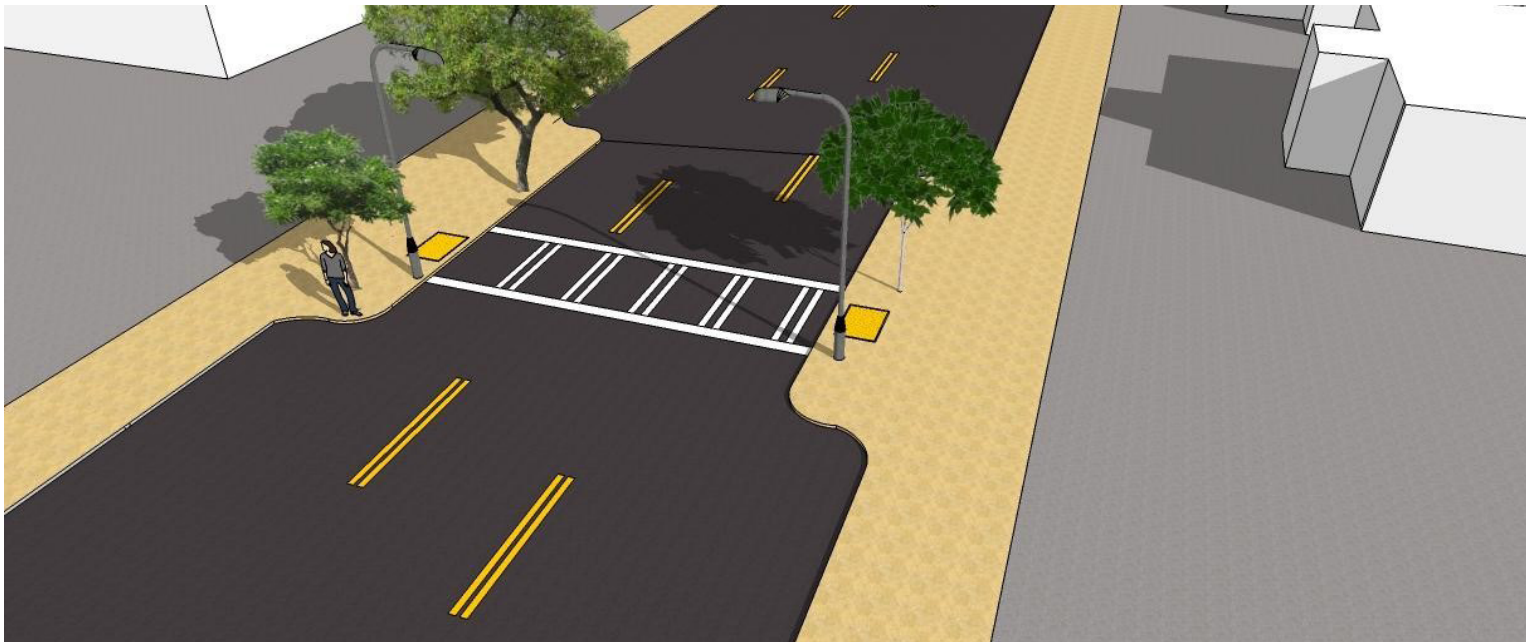


Figure 17:
Illustration of proposed pedestrian crossing between intersections

High-visibility pedestrian crosswalks with bulb-outs could be placed at key segments between intersections to enhance pedestrian connectivity.

Roundabouts

For urban arterial streets, roundabouts may be an effective alternative design, because they promote continuous flow as opposed to segmented phases and cycles. According to a National Cooperative Highway Research Program report, there was a 35% overall decrease in crashes and 81% decrease in fatal crashes at 55 intersections nationwide after roundabouts were implemented. To analyze operational efficiency of roundabout implementation at select intersections along the corridor, a Synchro model was built to simulate traffic flow at 12 signalized intersections.

Listed in Figure 18 are all the intersections on Memorial Drive with major road traffic (traffic on Memorial Drive) above 90% of the total activity at the intersection and therefore less effective for roundabouts. This ratio of major road volume to intersecting road volume is derived from studies on effective roundabouts. Typically, the ratio of traffic on the major road to the intersecting road should not be higher than 90% for an effective roundabout, however, in some cases this threshold can be slightly adjusted to a maximum of 85% of the total vehicles utilizing the intersection.

Because roundabouts have been observed to significantly reduce collision rates, consideration was given to accident-prone intersections, resourced through GDOT's accident reporting system. The GDOT database provides crash records from the past three years.

With the combined analyses of volume distribution and crash rates, the primary selection of potential roundabout locations were Capitol Avenue, Hill Street, Grant Street, Bill Kennedy Way, Maynard Terrace, 2nd Avenue, Cottage Grove and Candler Road.

The second level of screening for roundabouts was based on the comparison between roundabout and intersection performance. Reference was given to traffic modeling through Synchro to replace the eight selected intersections with roundabouts and compare measures of operational efficiency with their current signalized level of service.

The results show that some intersections operate less efficiently with roundabout implementation. For example, at Capitol Ave, the utilization of a roundabout is projected at such a congested capacity that the level of service is decreased to a G. At Hill St, the capacity remains the same while the level of service decreases from D to E, which indicates the implementation of a roundabout projects no operational advantage at this intersection. The intersections of Grant St, Bill Kennedy Way and Maynard Terrace however were projected to gain throughput efficiency with roundabout implementation.

FIGURE 18a: Volume on Memorial as Percentage of Total Intersection Volume

| Intersection | Percentage |
|------------------|------------|
| Fraser | 97% |
| Martin | 93% |
| Cherokee | 96% |
| Park | 99% |
| Chester | 91% |
| Stovall | 91% |
| Clifton | 92% |
| Wilkinson | 95% |
| Warren | 91% |
| East Lake Blvd | 92% |
| East Lake Dr | 94% |
| Flat Shoals Ave | 95% |
| Memorial Terrace | 94% |

FIGURE 18b: Accident Rates at Selected Intersections

| Intersection | # Collisions |
|-----------------|--------------|
| Capitol | 11 |
| Martin | 5 |
| Connally | 6 |
| Hill | 6 |
| Grant | 5 |
| Boulevard | 6 |
| Cameron | 5 |
| Bill Kennedy | 4 |
| Moreland | 10 |
| Maynard Terrace | 10 |
| Howard | 6 |
| 2nd Ave | 5 |
| Cottage Grove | 6 |
| Candler | 6 |

FIGURE 18c: Before/After Comparison of Roundabout Implementation

| Intersection | Before | | After | |
|-------------------------|--|------------|--|------------|
| | Intersection Capacity Utilization | LOS | Intersection Capacity Utilization | LOS |
| Capitol Ave | 79.70% | C | 105.5% | G |
| Hill St | 87.70% | D | 87.70% | E |
| Grant St | 57.40% | C | 60.1% | B |
| Bill Kennedy Way | 68.00% | C | 56.8% | B |
| Maynard Terrace | 78.00% | D | 83.9% | E |
| 2nd Ave | 80.70% | D | 74.5% | D |
| Cottage Grove | 70.60% | C | 73.9% | D |
| Candler Rd | 95.40% | F | 92.1% | F |

Maynard Terrace and Clifton

The intersections of Maynard Terrace and Clifton were observed jointly because of their interaction, proximity, and shared concerns. Clifton represents the end of the “speed section,” as well as the location of a proposed extension of the reversible-lane configuration. The transition at this location was seen as a strength because these intersections are well-used and a lower speed is desired near the adjacent Alonzo Crim High School. Maynard Terrace would be a good roundabout location both because of its size and that minimal right-of-way would need to be acquired.

Additionally, the lack of a sidewalk on the north side of Memorial Drive in between the two intersections creates a pedestrian hazard. The westbound bus stop is located on that side of the road, forcing teenage students to traverse Memorial Drive with limited or no pedestrian facilities. The access point for the gas station closest to Clifton compounds this pedestrian risk as it accommodates incoming vehicles from almost every angle. An alternative design would close eastern access to the gas station, in order for the reversible lane transition and roundabout to work at the highest efficiency. The resulting design provides space for adequate and safe pedestrian facilities. This alternative design also blends the reversible lane, roundabout and non-reversible segment westward in a fashion where there are no additional vehicle-to-vehicle conflict points.

Figure 19:
Illustration of
proposed intersection
redesign and lane
reconfiguration at
Clifton Street (looking
west)

The combination of an existing “speed section” and unsafe conditions for students at Alonzo Crim High School offer an opportunity for reducing the travel way to three lanes. The additional room could be used for sidewalks, trees, and better crosswalks.





Figure 20: Illustration of proposed intersection redesign and lane reconfiguration at Clifton Street (aerial looking northwest)

*At left: Reducing travel lanes to three would gain additional right-of-way for sidewalks on the north side of Memorial Drive. There are currently **no sidewalks** on this block, despite being across the street from the high school.*

Figure 21: Illustration of proposed intersection redesign and lane reconfiguration at Clifton Street and Maynard Terrace (wider aerial looking northwest)

At right: A wider view of the proposed redesign between Clifton Street (lower right) and the Maynard Terrace roundabout (upper left). The changes would improve the safety and appearance of the segment from its current condition. Computer traffic modeling suggests that reducing the overall design speed on Memorial could maintain or improve vehicle throughput, while reducing emissions.





Figure 22: Illustration of proposed roundabout at Maynard Terrace (aerial looking northeast)

Above: Roundabouts improve vehicle progression through a continuous flow, rather than the stop-and-start cycles of conventional intersections. Research indicates that they significantly reduce the number of total crashes and fatal crashes.

Figure 23: Illustration of proposed roundabout at BeltLine/Bill Kennedy Way (aerial looking southwest)

Left: Traffic modeling of potential roundabouts on Memorial Drive showed they were more effective at intersections with streets that carry lower volumes of cars, such as at Bill Kennedy Way and the BeltLine. The design can be easily adapted for future transit.



Bill Kennedy was another intersection that met the criteria for a roundabout and holds particular interest with a connection to the Atlanta Beltline to the north. South of this intersection is a bridge with ramps only on the west side and an existing bike path. These elements, along with a comparatively quiet intersection, make this space available for more effective pedestrian and bicycle facilities to better connect communities on both sides of I-20 with the future Beltline extension.

The right-of-way necessary to implement a roundabout would take place on land owned by the Beltline presently and is roughly calculated to be 744 sq ft. Some right-of-way is gained by merging the lanes with a median of smaller width and using the acquired space for sidewalks, bike paths and landscaping. Illustrations of possible designs are included in Figures 23 and 24.



Figure 24: Illustration of proposed lane configuration and roundabout at BeltLine/ Bill Kennedy Way (aerial looking west)

The next extension of the Eastside Trail (est. completion in 2017) will end here, bringing with it high volumes of BeltLine users from all over the city and beyond. More dense development is coming. Enhanced pedestrian and bike improvements, along with reduced driving speeds, will be key for this location.

Signalizing Howard Street

Currently the only signalized intersection in this speed section is at the East Lake YMCA facility and Drew Charter School. A young girl was struck by a turning vehicle at this intersection in recent weeks. No matter the cause of the accident, pedestrian safety concerns at such a location should be a primary focus of this segment. Slightly farther up the road at Howard Street, an additional safety concern arises with the line of sight distance for vehicles turning onto Memorial Drive from Howard. This intersection sees higher traffic because of its proximity and direct connection to Hosea Williams and its use by Kirkwood residents as the main thoroughfare to access the Memorial Drive.

Because the intersection at Howard is located just off of the crest of a hill, eastbound traffic on Memorial has a very short stopping distance. The line of sight in both directions, particularly to the west, is too short for efficient intersection flow and vehicles were observed at taking lengthy amounts of time to turn either direction onto Memorial Drive because of the safety risk. Preliminary traffic counts were observed and plotted against the MUTCD traffic signal warrant graph showed in Figure 25.

Figure 25: Chart of traffic volumes that justify signals at intersections of major and minor streets

The curves indicate the volume at which a traffic signal is warranted where a minor street intersects with a major street. The three lines show different lane configurations. Volumes above the curved lines require a light; those below don't. A preliminary traffic count conducted by studio members indicates the volume at Howard Street warrants a traffic light because of volume, low visibility, and danger to pedestrians. Source: Manual on Uniform Traffic Control Devices, FHWA.

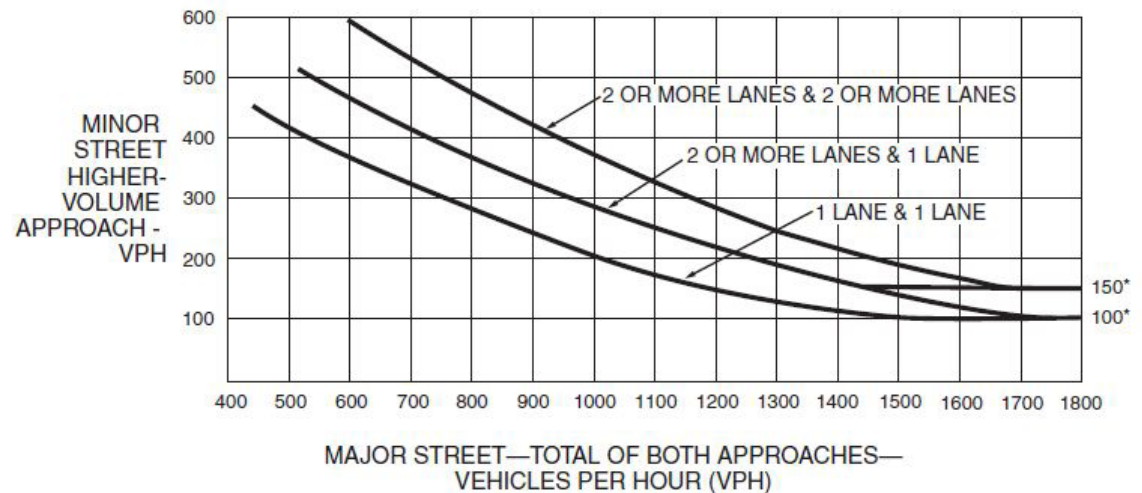




Figure 26: Driver's perspective from southbound Howard Street looking east on Memorial Drive

Above: A driver attempting to turn right (west) onto Memorial Drive has severely limited visibility because of topography and vegetation on the corner property. This is one of the "speed sections" where the combination of four lanes, hilly terrain, and multiple access points creates dangerous conditions for all modes. Photo by Marcus Ashdown.

Figure 27: Driver's perspective from southbound Howard Street looking west on Memorial Drive

Right: A driver attempting to turn left (east) on Memorial Drive also has limited visibility because of topography and landscaping on the corner property. Photo by Marcus Ashdown.



Whitefoord

Whitefoord is presently a transition point between three lanes with reversible lane and regular four lanes. Furthermore, its north leg does not align with its south leg, making it more confusing to drive through. Drivers coming southbound down Whitefoord Avenue complain that, during PM peak hours, making a left turn to Memorial Drive, merging into main traffic flow is extremely hard due to the large amount of traffic and sight distance problems. To solve this problem, strategies should be taken to coordinate the traffic from different directions and eliminate the confusion of the reversible lane.

The lane configuration of Memorial drive is proposed to change significantly at this intersection. For the west side, the three lanes are converted to two lanes with raised median. For the segment between Whitefoord Avenue and Memorial Terrace, original four lanes are transformed to two lanes. The extra ROW derived from road diet is proposed to construct sidewalks. For the east side, two lanes continue for 100 feet and change to four lanes, with two lanes merging into one for westbound traffic and one lane separates to two lanes for eastbound traffic.

Figure 28: Illustration of current intersection at Whitefoord

The corridor at Whitefoord combines an unaligned intersection, a poorly marked transition between three lanes and four lanes, and a steep grade to boot.





Figure 29: Illustration of the famous “Ovalabout” design for Whitefoord intersection

The “Ovalabout” offers a unique combination of a roundabout’s continuous traffic flow, while its shape addresses the offset intersection.

Alternatives for Whitefoord

Alternative 1 - “The Ovalabout” (ROW 4400 sf) - It builds on the continuous efficiency of the roundabout while mitigating an offset intersection. Offset intersections are common along the corridor, including Moore & Kelly streets, Grant Street, Oakland Avenue, East Side Avenue, Howard Street, East Lake Terrace, and Daniel Avenue.

Traffic flows around an ellipse-shaped median, as shown in Figure 29. There is little need for additional right of way beyond that of a standard intersection.

Strengths of the Ovalabout design:

- Continuous flow
- Zero head-to-head collision points
- Enhanced pedestrian safety
- Horizontal curvature in vehicle path calms traffic

Challenges of the Ovalabout design

- Making left turns off Memorial requires longer distance
- Difficult turning radius for large trucks

Alternative 2 - Realignment (ROW: 4400 sf)

- Realign the offset road by directly connecting Whitefoord and Memorial Terrace.
- Remove the two traffic signals and install a new one for the single intersection

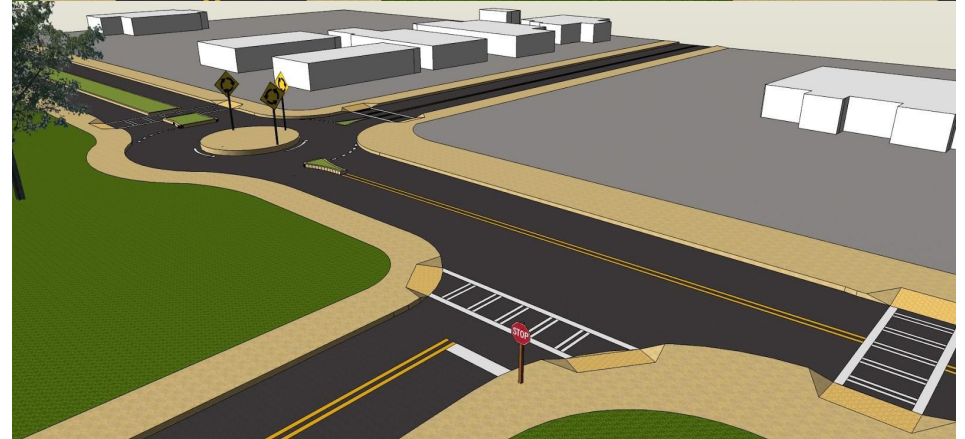
Figure 30: Illustration of realignment of Whitefoord and Memorial Terrace



Alternative 3 - Roundabout + Stop Sign (ROW: 500 sf)

- Remove both traffic signals, install roundabout with indicators at Whitefoord
- Raised medians at each direction to separate traffic flows
- Ramps for crosswalks
- Road diet between Whitefoord and Memorial Terrace. Remove two lanes and use additional ROW to construct sidewalks.
- Add a stop sign at Memorial Terrace

Figure 31: Illustration of roundabout at Whitefoord with elimination of signal at Memorial Terrace



Alternative 4 - Traffic signal + Stop Sign (ROW: 0 sf)

- Keep the traffic signal at Whitefoord
- Add a stop sign at the intersection of Memorial Terrace

Figure 32: Illustration of realignment of Whitefoord and Memorial Terrace



Boulevard

Boulevard is one of the busiest intersections in the corridor. A key issue is truck traffic traveling between the Hulse multimodal freight yard and Interstate 20. Oakland Cemetery on the northwest corner and other restaurants and businesses in the surrounding community generate pedestrians across the intersection. Also, for the west leg, the left-turn traffic signal has no corresponding left turn lane to separate the left turn vehicles, which are always blocked by through traffic. The conflict points between pedestrians and traffic of different directions have to be controlled and eliminated.

Alternative design considerations for Boulevard intersection, shown in Figure 33:

- For eastbound segment, reduce the lane width from 11' to 10'
- Take 900 sqft more ROW on the south side to add a left turn lane in the middle
- Add fences on street corners to protect pedestrians
- Repair the sidewalks on northeast and southwest corner
- Add ramps on northeast and northwest corner

East Lake

One of the most critical goals is to improve pedestrian safety at this intersection. There is heavy pedestrian demand between the Kirkwood neighborhood to the north and the YMCA and Drew Charter School to the south. Dr. Nisha Botchwey, the co-president of the Drew Charter School PTA, reported that children walk around the back of the corner church because they feel unsafe walking along Memorial Drive. Depicted in Figure 34, nothing but a dirt path exists on the north leg of East Lake Terrace. The sidewalk on Memorial is only a few inches higher than the road and is bound by a stone wall. These concerns could be mitigated with the following proposed intersection enhancements, depicted in Figures 35 and 36:

- Plant trees and set fence along the segment between East Lake Terrace and East Lake Boulevard. According to the tree planting standard, spacing between two trees would be 25 feet.
- Plant trees and set fence along the segment between East Lake Boulevard and Watson Circle, and change the fourth lane on north side to street parking and reserve space for disabled people.
- Set ramps on both ends of the crosswalk to meet with ADA requirement.
- Set new a crosswalk at East Lake Blvd to connect the sidewalks on both sides, and put warning board to remind passing cars to give way to pedestrians.



Figure 33: Illustration of Boulevard redesign

Above: A key element at Boulevard will be adding a dedicated turn lane from eastbound Memorial to northbound Boulevard. Fences would help protect pedestrians at the high-volume intersection.

Figure 34: Photo of intersection at East Lake Blvd

Right: Students walking to Drew Charter School south of Memorial have inadequate sidewalks and little protection from high-speed traffic.





Figure 35: Illustration of intersection at East Lake Boulevard (looking northwest)

Above: Reducing this "speed section" to three lanes allows room for new sidewalks and protective barriers to shield children walking to school.



Figure 36: Illustration of intersection at East Lake Boulevard (wider aerial, looking northwest)

Moreland Avenue

Currently there are three segments of reversible-lane configuration along Memorial Drive. The shortest segment, from Moreland to Whitefoord, is barely a quarter-mile long. Besides the short length, the transition just on the east side of Moreland includes both directions in one lane with a dashed diagonal marker as the only indication on how to avoid a head-on collision. This unsafe present condition can be observed in Figure 38 below. The distance between Moreland and the proposed oval-about at Whitefoord is so minimal that it's possible to keep a two-lane configuration or three lanes with two westbound lanes so as to retain queue capacity at Moreland. This proposed change is depicted in Figure 37 from the similar eastbound perspective from the Moreland intersection illustrating the lane alignment and added median.

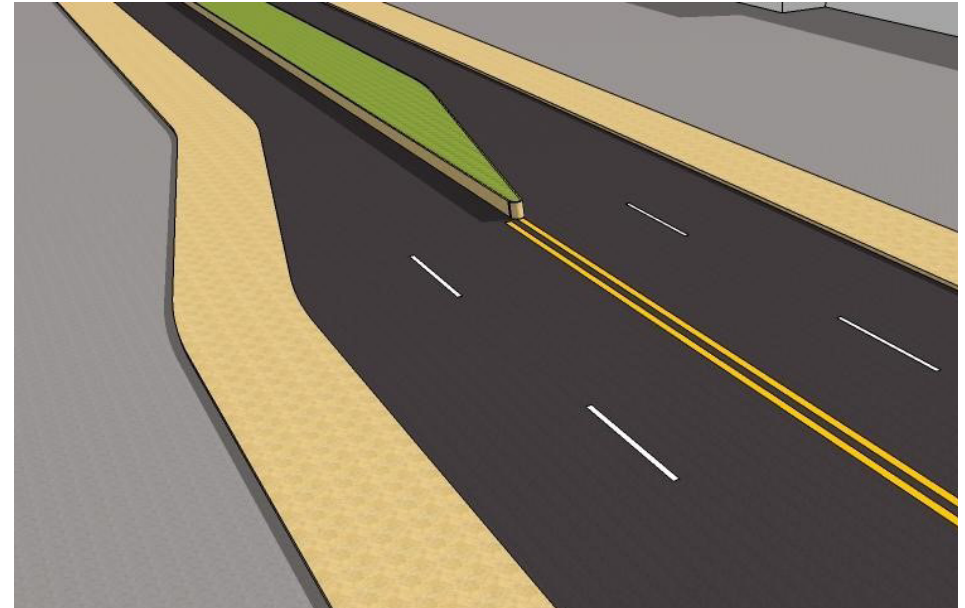


Figure 37: Illustration of proposed lane configuration east of Moreland Avenue

Above: More capacity would be kept near the Moreland intersection, but narrow down as it approaches the proposed Whitefoord "Ovalabout."

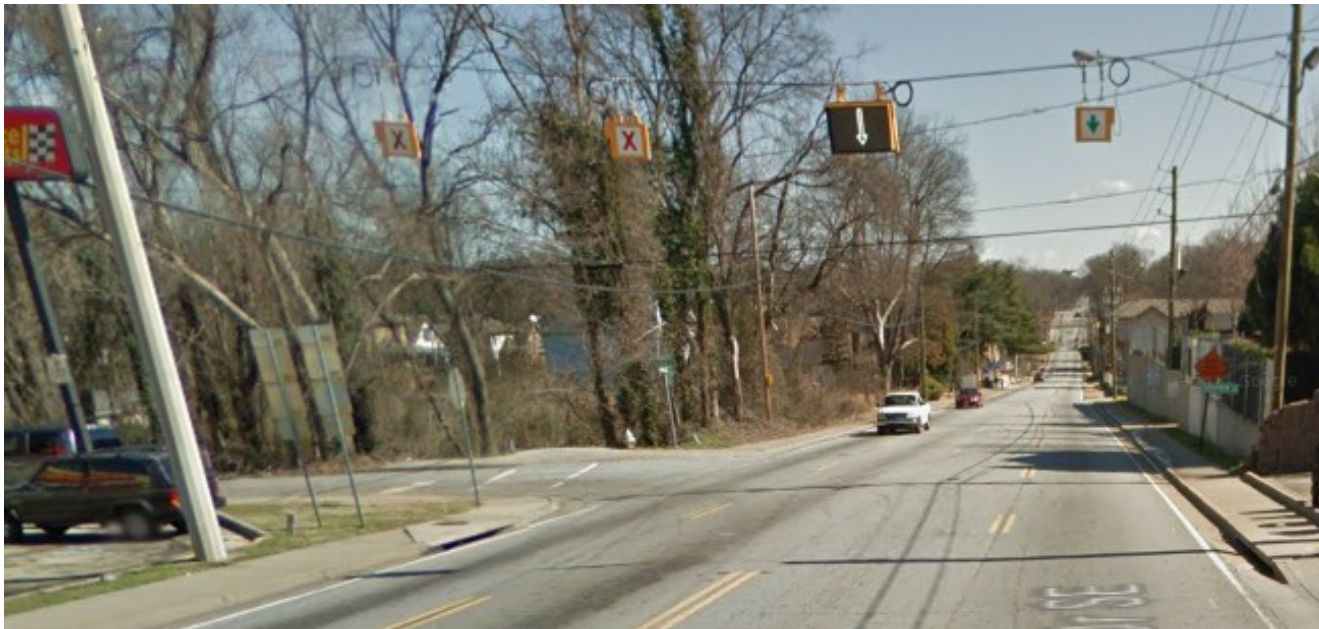


Figure 38: Photo of current lane transition east of Moreland

Left: The left eastbound lane from Moreland leads merges into the reversible lane, with only a small overhead sign to mark the direction. Photo from Google Streetview.

Cottage Grove

The fundamental concern with the intersection at Cottage Grove, 4th Street and Memorial is the unsafe geometry depicted in Figure 39. Currently Cottage Grove (the diagonal road) has fewer than 200 vehicles per hour during peak. It has no access points between this intersection and 3rd Street to the west, with the exception of a service driveway for the vacant elementary school on 4th Street. While observing this intersection, the authors witnessed a motorcycle collision at the west side of the intersection on Memorial Drive. Because the westbound stop bar is located so far back from the intersection (due again to the awkward geometry) advancing vehicles could not be seen by the motorcyclist turning onto Memorial Drive. There is also no pedestrian crossing, despite commercial buildings on either side.

To mitigate these geometric flaws, it is proposed that Cottage Grove end at 3rd Street, diverting traffic down either 3rd or 1st to gain access to Memorial Dr., and the service driveway for the school be re-routed to follow the base of the topographic change at the school and connect to 4th Street directly. The resulting effect would be the creation of a standard “T” intersection. Depending on more comprehensive traffic projections, it may or may not warrant a traffic signal.

The acquired space could be used to make the intersection more attractive for pedestrian use. Of several alternative designs, community input favored a plaza in front of existing storefronts on Memorial Drive, enhanced pedestrian facilities, and space for a bus pull-out so that the nearby Route 21 stop would not need to impede traffic. This alternative design proposal for the Cottage Grove intersection (which would not include Cottage Grove anymore) is included in Figures 40-43.



Figure 39: Illustration of current intersection at Cottage Grove

Cottage Grove curves toward Memorial Drive from the top right of the frame. Drivers turning left (east) onto Memorial can't see the indicator for the reversible lane until they are fully facing oncoming traffic.



Figure 40: Aerial photo of Cottage Grove with proposed street closure (highlighted)

The shaded green area shows the portion of Cottage Grove that could be closed to traffic with minimal loss of access for the community. Drivers would access Memorial with a signal at 3rd Avenue. Access to the school site would remain via 4th Avenue. Photo from Google Streetview.



Figure 41: Illustration of proposed redesign of Cottage Grove/4th Avenue intersection

Eliminating the Cottage Grove connection at 4th Avenue would allow a more traditional intersection design, while opening up two large wedges of right-of-way for other uses, such as greenspace, outdoor retail seating, a protected lane for MARTA buses, and shorter crosswalks.



Figure 42: Photo of existing Cottage Grove intersection viewed from westbound Memorial Drive

The current configuration allows for a high-speed merge from Memorial Drive onto Cottage Grove, directly in front of a historic block of street-oriented businesses. Photo from Google Streetview.

Figure 43: Illustration of proposed redesign of intersection at Cottage Grove/4th Avenue (closer view)

The bones of a classic neighborhood retail district are in place at Cottage Grove. Relatively minor changes to surrounding traffic patterns could spark new commercial vitality for the area.s



Access Management Plan

Extensive access to and from Memorial Drive is essential to the efficiency of the corridor and provides adequate transportation service to the surrounding communities. This considered, points of access should be selective and preferential to the corridor's nature as an arterial route. Using an existing network of collector roads can facilitate more continuous and safe traffic flow. This concern is highest where small commercial and residential lots have numerous driveways onto the arterial corridor. These create an unsafe environment for users of all transportation modes as the infrequent use of these smaller, more numerous curb cuts force vehicles to react to incoming and outgoing vehicles at significantly different speeds. The balance of too few or too many access points along Memorial Drive would be most adequately handled through existing collector roads and the further development of the hierarchal roadway network that supports the east Atlanta communities.

Implement Rapid Transit Options

The study area is bordered to the north by the Blue and Green MARTA Lines, which all local bus routes feed into. The implementation of high-capacity rapid transit around the prospective areas of development will add another level of rapid access to Downtown Atlanta and points beyond from the Memorial Drive Corridor. This will also infuse a focus on transit-oriented development along the corridor in distressed areas. The Atlanta BeltLine has proposed two alignment options for the Atlanta Streetcar extension from Downtown. One alignment option will take it through Inman Park along the currently-proposed Eastside Trail extension to Memorial Drive. It will require tunneling under CSX's Husley Intermodal Rail Yard to Wylie Street in Reynoldstown. It will follow Wylie to the Eastside Trail east

of Chester Avenue and follow south and use Bill Kennedy Way across Interstate 20 to Glenwood Park. Another alignment option will send the existing streetcar from the Edgewood Avenue and Jackson Street. There will be two tracks, one coming south on Hilliard Street and another going south on Jackson. Both will merge on Grant Street providing access to the King Memorial MARTA Station, and then proceed east on Memorial to Bill Kennedy Way.

The Metropolitan Atlanta Rapid Transit Authority (MARTA) has proposed a 12-mile bus rapid transit (BRT) line along Interstate 20. The BRT line will utilize the High Occupancy Vehicle (HOV) lane in the center of the freeway, with a small arterial run along Memorial Drive, Bill Kennedy Way, Moreland Avenue, Capitol Avenue, and Martin Luther King Jr. Drive. The BRT line will empty into a future extension of the Blue Line that will continue to the Mall at Stonecrest in Lithonia. The BRT Line will cut through the western portion of the study area starting at the Five Points MARTA Station, and following surface streets down to Interstate 20. There will be an instance where the vehicle will utilize the surface streets along Bill Kennedy Way, Memorial Drive, and Moreland Drive, where there will be two stations on Bill Kennedy Way and Moreland Avenue.

The implementation of transit in this project focuses on the connectivity of both of these new high-capacity lines with the existing high-capacity lines with our proposed bike and pedestrian improvements. Transit lines do not meet their purpose if there is no walkable environment surrounding a transit stop. With the addition of three new premium transit stops along the Memorial Drive Corridor, a new focus on transit-oriented development and a more pedestrian-friendly environment would be required.

To anticipate the feasibility of these initiatives to the proposed bike and pedestrian connections, there will need to be analyses conducted:

- A Transit Level of Service (LOS) on existing bus stops to anticipate changes in service
- Transit Demand Analyses of the proposed transit stops
- Comparison of possible stop locations

Bike Connectivity to Transit

With the addition of several additional bike lanes, sidewalks

and bikeways in the future, there lies an idea to connect all of the paths for the sake of enhancing transportation along Memorial Drive. It helps to recognize bike travel in a transit network, no matter how big or small. The bike and pedestrian paths will serve as a last-mile connectivity route to the existing and proposed stations, while forming their own network in their respective mode. The recommended maximum distance for cyclists to travel to a rapid transit station is 2.5 miles. Every proposed route as well as the existing routes fit the maximum distance given the existing MARTA heavy rail and the proposed MARTA BRT line. It is easy to bike from a rapid transit station to an activity center, school, or a park within the recommended 2.5 mile route distance.

Figure 44: Illustration of a potential BeltLine transit stop cross-section

The crossing of the BeltLine corridor at Bill Kennedy Way will offer new opportunities for last-mile connectivity and street design. The BeltLine Subarea 4 Master Plan calls for denser uses around the node and infrastructure for multimodal users.

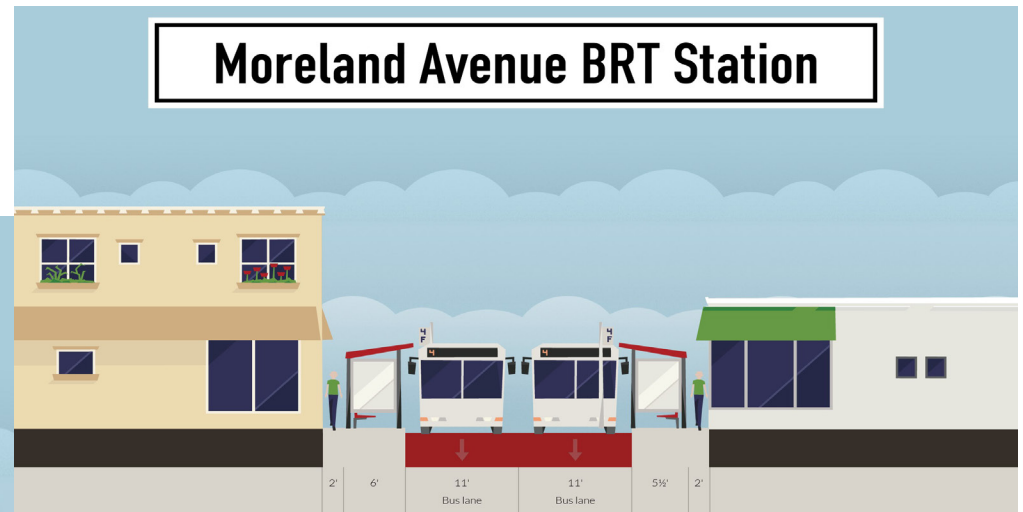
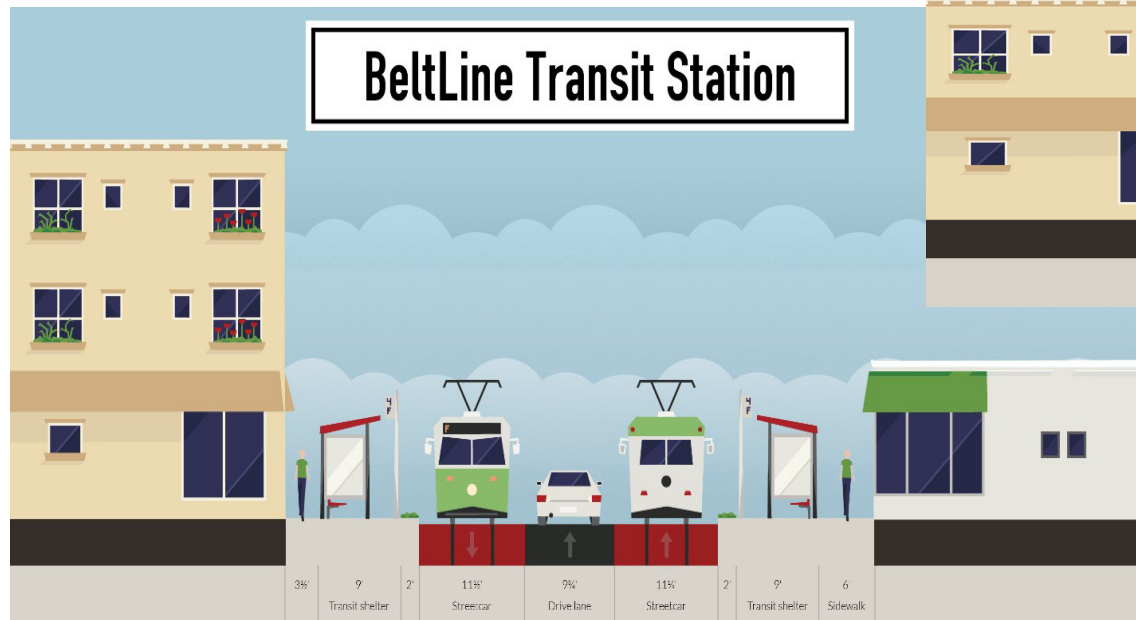
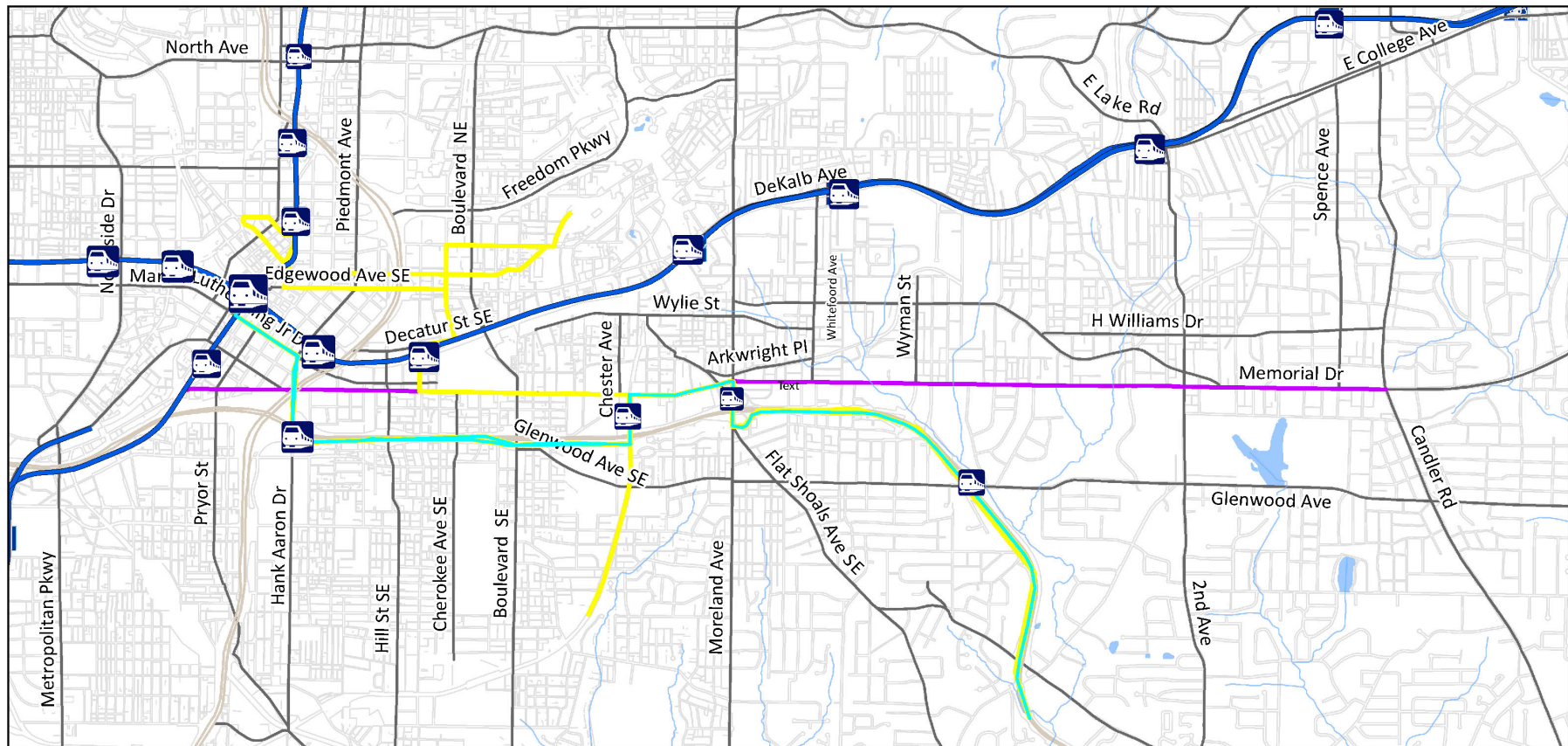


Figure 45: Illustration of a potential MARTA Bus Rapid Transit (BRT) stop at Moreland Avenue

Above: Design concept for a BRT station bordered by existing or new mixed-use buildings along the Flat Shoals Avenue spur that currently dead-ends at Moreland Avenue.

HIGH CAPACITY TRANSIT ALIGNMENTS



EXISTING INFRASTRUCTURE

- MARTA Rail
- Memorial Corridor
-  MARTA Rail Stops

PROPOSED ENHANCEMENTS

- Atlanta Streetcar Alignment
- BRT Line
-  MARTA Rail Stops

Figure 46: Map of proposed high-capacity transit alignments near Memorial Drive

Planning continues for a Bus Rapid Transit (BRT) route for the I-20 East corridor. Such a network could reduce the traffic volume on Memorial Drive and offer better connectivity to job centers downtown and elsewhere in the metro area. Proposed stops include Glenwood Avenue, Moreland Avenue, and Bill Kennedy Way/BeltLine. City of Atlanta planners also want to explore a stop at Maynard Terrace.

IMAGINE MEMORIAL - CONNECTIVITY VISION

By Corentin Auguin, GA Tech MCRP 2014

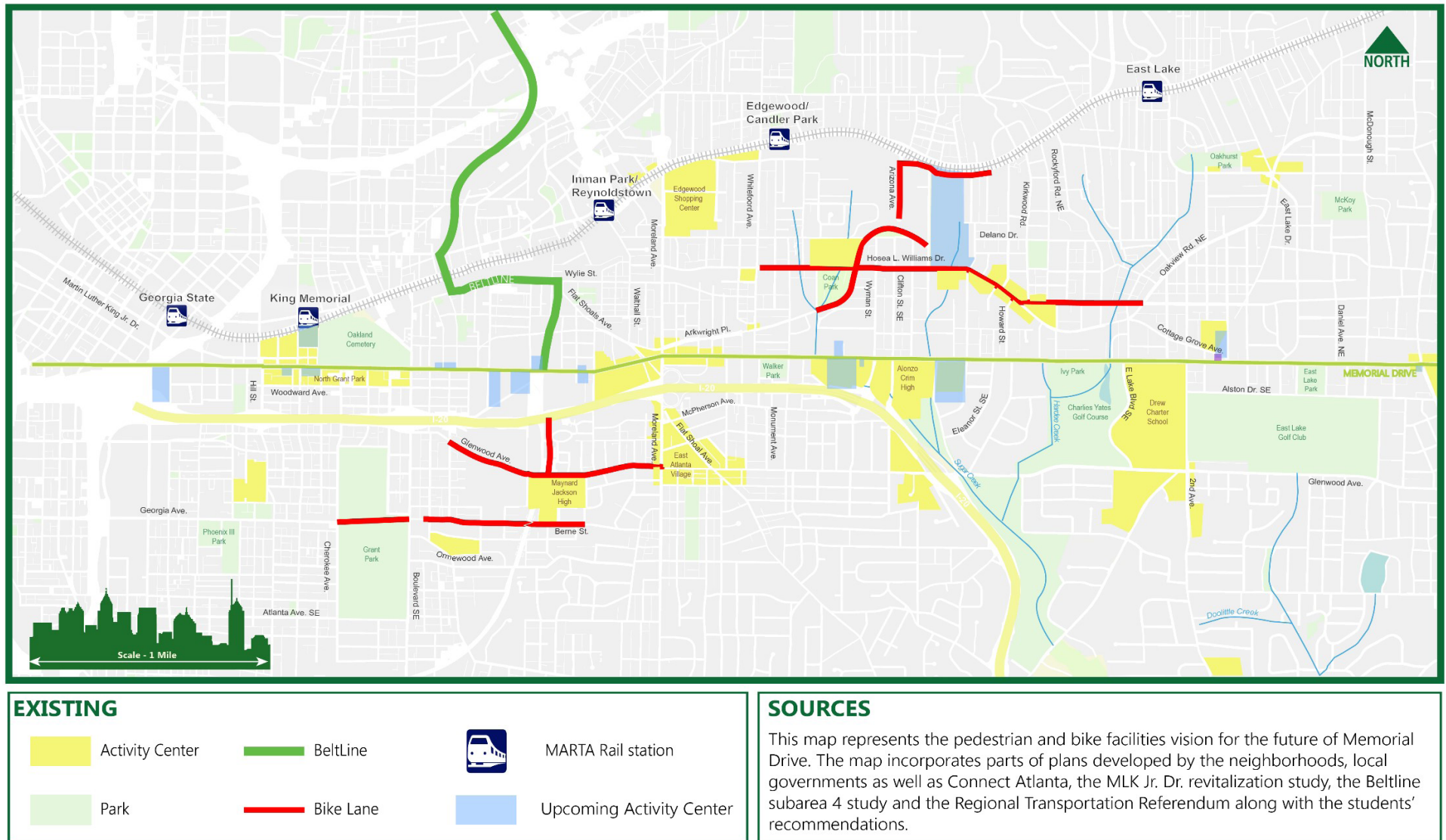


Figure 47: Map of existing alternative mode routes in the study area

The main theory behind the Connectivity plan is to identify existing and planned routes that allow users to get between key activity centers without driving. These routes will not necessarily use Memorial Drive directly, but will offer safe alternatives along its length. There are already several elements in place, thanks to the City's Connect Atlanta plan, the PATH Foundation, the BeltLine, Atlanta Bicycle Coalition, and others.

VII. CONNECTIVITY

Connectivity is a primary measure of the success of a transportation network. As a comprehensive plan, the Imagine Memorial study focused heavily on future connectivity among the neighborhoods and activity centers. Major existing and future activity centers, current and proposed bicycle and pedestrian networks, and current and proposed transit were considered.

This connectivity plan was compiled through stakeholder and public input, collaboration with public and private entities, spatial analysis, and field work. Assessment began with an activity center analysis to determine where there were a large number of trip origins and destinations. Then potential alternative routes for non-automobile modes were devised through review of existing plans, public input, and consideration of ideal project designs from other locations in the United States and abroad.

Activity Center Analysis

Activity centers can be defined as areas which serve as local nodes for transportation, commercial, and public activities. They may be public parks, schools, local retail corridors, or large commercial developments where multi-modal transportation users are likely to gather. Spatial GIS analysis was used to map these areas, and public feedback was used to add additional areas identified by local residents. Once the final activity centers were identified, the presence of existing multimodal networks was considered in order to identify centers lacking safe or effective non-automobile access routes, as shown in Figure 46.

Bicycle and Pedestrian Connectivity Plan

Bicycle and pedestrian modes are critical transportation alternatives for individuals who wish to avoid automobile use. These individuals choose alternative transportation for both voluntary and involuntary reasons. In order to promote the economic security, health, well-being, and happiness of Memorial Drive area residents, an expanded multi-modal connectivity network is proposed. A full bicycle and pedestrian network such as the one developed in this Imagine Memorial plan offers local residents a healthy, inexpensive and safe alternative to automobile use, as well as a valuable recreational resource.

Connectivity Network

The final draft bicycle and pedestrian connectivity network for the Imagine Memorial plan is displayed in Figure 49. The full list of proposed projects needed to complete the connectivity network is available in Figure 47 with cost estimates and project details. Cost estimates were developed from the Costs for Pedestrian and Bicyclist Infrastructure Improvements from the UNC Highway Safety Research Center. Only projects for which reasonably accurate estimates could be produced, primarily point improvements such as crosswalks and barriers, were assigned costs. More complicated and lengthy projects involving varying design requirements were not estimated in order to prevent inaccurate representations. The proposed network prioritizes areas with the greatest needs. These include the East Lake and East Lake Park area, the area surrounding Alonzo Crim High School, and the East Atlanta area. Large scale future pedestrian developments such as the BeltLine trail and the Battle of Atlanta Trail are the foundation of the future network. Department of Public Works projects along Memorial, including the removal of a lane for a sidewalk expansion along the five lane portion of Memorial Drive

east of Oakland Cemetery in three phases, were also considered. High-visibility crossings are proposed to improve north-south mobility and safety across Memorial Drive. East Lake Park, currently without sidewalk access or a high-visibility crossing, is proposed to receive a sidewalk extension and a PAB signal crossing Memorial Drive at Daniel Street (project C-09). Stakeholders expressed a strong desire for this project. Curb extensions, barriers and painted school zone and crossing markings are proposed at Clifton Street alongside Crim High School to slow traffic and prevent students from cutting through the busy intersection. The crossing will also support the proposed bike lane along Clifton St (project P-03).

An additional PAB signal is proposed at the crossing of the Battle of Atlanta trail (project C-05). This signal will allow safe access to the new trail for residents on both sides of Memorial Drive. Crossings will also be integrated into the “ovalabout” roadway design proposed for the Memorial Drive, Memorial Terrace, and Whitefoord intersection (project C-03). These crossings will provide access to the proposed pedestrian bridge across I-20 at Memorial Terrace.

New Multi-Use pathways are proposed along the Sugar Creek right of way. A large portion of this pathway is designated as the Battle of Atlanta Trail and is scheduled for construction in upcoming years. The trail is designed to provide increased north-south connectivity and connect the McPherson Monument to the Walker Monument for recreational users (project T-02). An additional possible trail alternative is proposed along Doolittle Creek south of the East Lake Golf Club (project T-01).

Proposed bike lanes and bike lane upgrades were chosen to complement the existing bike infrastructure. Total mileage for the final bike network is 25.61 miles after completion, including 20 miles of newly proposed infrastructure. Only fully painted and marked bike lanes were considered as existing and meeting

desired standards for recreational and casual bicyclists. The most fully featured bicycle improvements are proposed along Arkwright Place and Flat Shoals Avenue. Existing pavement from an old trolley right-of-way is designated for use as a full two-way bicycle and pedestrian boulevard (projects B-12 and B-13). Woodward Avenue just south of Oakland Cemetery is also designated as a bike boulevard to provide access to the Grant Park area without being forced onto Memorial Drive (project B-02).

This route will also be enhanced by a large green painted bike and pedestrian crosswalk at Boulevard (project C-01). Additional painted and marked bike lanes are proposed along Clifton St, Bill Kennedy Way, Cherokee Ave, Whitefoord Ave, and East Lake Drive. The primary east-to-west bicycle routes are placed along Glenwood Ave and Hosea Williams Drive, which already feature bike lanes along part of their extents (projects B-09, B-20). These routes run parallel to Memorial Drive to both the north and south, diverting bicyclists away from the more dangerous speeds along the central corridor.

Major bicycle and pedestrian upgrades are proposed at several crossings over Interstate 20 to further enhance connectivity. These include complete sidewalks and bike lanes along Clifton Street, a new bicycle and pedestrian bridge connection between Monument Avenue and Memorial Terrace in the central study area, and bike and pedestrian improvements along Bill Kennedy Way, Cherokee Ave, and Maynard Terrace. Additional long-term improvements include the introduction of complete streets and shared space designs at major bicycle and pedestrian intersections such as the intersection of Oakview and Cottage Grove, the Oakhurst Park area, the extent of Memorial Drive along Oakland Cemetery to the BeltLine crossing, and the intersection of Hosea Williams and Whitefoord. The potential closure of the Flat Shoals stubs along Memorial Drive may also be used to create a pedestrian hub and gateway to Reynoldstown.

FIGURE 48: Bicycle and Pedestrian Alternatives

| ID | LOCATION | TYPE | STATUS | ESTIMATED COST (\$) |
|--------------|---|---------------------------|------------|---------------------|
| B-01 | MLK Jr. Dr. | Bike Lane | Proposed | |
| B-02 | Woodward between Kelly and Chastain | Bike Boulevard | Proposed | |
| B-03 | Hill St between MLK and Georgia Ave. | Bike Lane | Proposed | |
| B-04 | Memorial Dr. between downtown and Cherokee | Bike Lane | Proposed | |
| B-05 | Georgia Ave. between connector and Grant Park | Bike Lane | Proposed | |
| B-06 | Boulevard between memorial and Beltline | Bike Lane | Proposed | |
| B-07 | Berne St between Glenwood Pl. and Moreland | Bike Lane | Proposed | |
| B-08 | Ormewood between Grant Park and Brownwood park | Bike Lane | Existing | |
| B-09 | Glenwood a between Cherokee and Candler Rd. | Bike Lane | Incomplete | |
| B-10 | Wylie between beltline and Whitefoord | Shared Lane | Proposed | |
| B-11 | Walthall between Caroline and flat shoals | Shared Lane | Proposed | |
| B-12 | Flat Shoals Ave between Wylie and Moreland | Bike Boulevard / Ped Path | Proposed | |
| B-13 | Arkwright/Woodbine between Moreland and Gilliam park | Bike Boulevard / Ped Path | Proposed | |
| B-14 | Whitefoord between rail and Memorial Dr. | Shared Lane | Proposed | |
| B-15 | Monument Ave between memorial and Glenwood | Bike Lane | Proposed | |
| B-16 | La France between Marion Pl. and Arizona | Bike Lane | Proposed | |
| B-17 | Pullman bike path to Locust St. | Bike path | Existing | |
| B-18 | College Ave to E. Lake Dr. | Bike Lane | Proposed | |
| B-19 | Arizona Ave. between La France and Gilliam park | Bike Lane | Incomplete | |
| B-20 | Hosea L. Williams Dr. to Oakview | Bike Lane | Existing | |
| B-20A | Hosea L. Williams Dr. from Oakview to Candler | Bike Lane / Shared Lane | Proposed | |
| B-21 | Wyman between Hosea L. Williams dr. and memorial. | Bike Lane | Proposed | |
| B-22 | Rockyford Rd between college Ave and Hosea L Williams Dr. | Bike Lane | Proposed | |
| B-23 | Oakview Rd. between Hosea L. Williams Dr and E. Lake Dr. | Bike Boulevard | Proposed | |
| B-24 | E. Lake Dr. between College Ave and Memorial Drive | Bike Lane | Proposed | |
| B-26 | Clifton St between Hosea and Glenwood | Bike Lane | Proposed | |
| C-01 | Woodward @ Boulevard | Crossing | Proposed | 26,850 |

| | | | | |
|-------------|--|---------------------------|----------|---------|
| S-01 | Woodward @ Glenwood | Sidewalk | Proposed | 4,420 |
| P-01 | Memorial Dr. @ Stovall | Barriers | Proposed | 7,100 |
| C-02 | Wilbur @ Memorial Drive | Crosswalk / Barriers | Proposed | 12,000 |
| C-03 | Memorial Dr. @ Memorial Terrace | Crosswalk / Barriers | Proposed | |
| C-04 | Memorial Drive @ walker park | Crossing | Proposed | 3,000 |
| C-05 | Memorial Dr. across new creation church | Crosswalk | Proposed | 26,850 |
| S-02 | Clifton St , across Alonzo Crim High | Trail Crossing and PAB | Proposed | 34,000 |
| P-02 | Clifton St , across Alonzo Crim High | Sidewalk | Proposed | 18,840 |
| P-03 | Memorial Dr. @ Clifton St | Barriers | Proposed | 20,910 |
| S-03 | Memorial Dr. between Clifton and clay. | Barriers / Curb Extension | Proposed | 11,680 |
| C-06 | Memorial Dr. @ Shy Temple CME Church | Sidewalk | Proposed | 3,000 |
| S-04 | E. Lake Blvd south of Memorial | Improved Crossing | Proposed | 32000 |
| S-05 | Memorial Dr. south side along Drew charter high | Sidewalk | Proposed | 206,250 |
| P-04 | Memorial Drive @ E. Lake Blvd, south east corner | Sidewalk | Proposed | 3,650 |
| S-06 | 2nd Ave south of Memorial | Barriers | Proposed | 21,750 |
| C-07 | Memorial Dr. @ 3rd Ave | Sidewalk | Proposed | 3,000 |
| P-05 | Memorial Dr. @ Cottage Grove | Crosswalk | Proposed | |
| C-08 | Memorial @ Club place | Barrier | Proposed | 3,000 |
| S-07 | Memorial Dr. at East Lake Park | Crosswalk | Proposed | 98,100 |
| C-09 | North east corner of East Lake Park | Sidewalk | Proposed | 70,680 |
| S-08 | Memorial drive @ 3rd Ave, north east corner | Crosswalk and PAB | Proposed | 21,450 |
| T-01 | Doolittle Creek Trail | Sidewalk | Proposed | |
| T-02 | Battle of Atlanta Trail / Sugar Creek Trail | Multi-Use Path | Proposed | |
| | | | | |

IMAGINE MEMORIAL - CONNECTIVITY VISION

By Corentin Auguin, GA Tech MCRP 2014

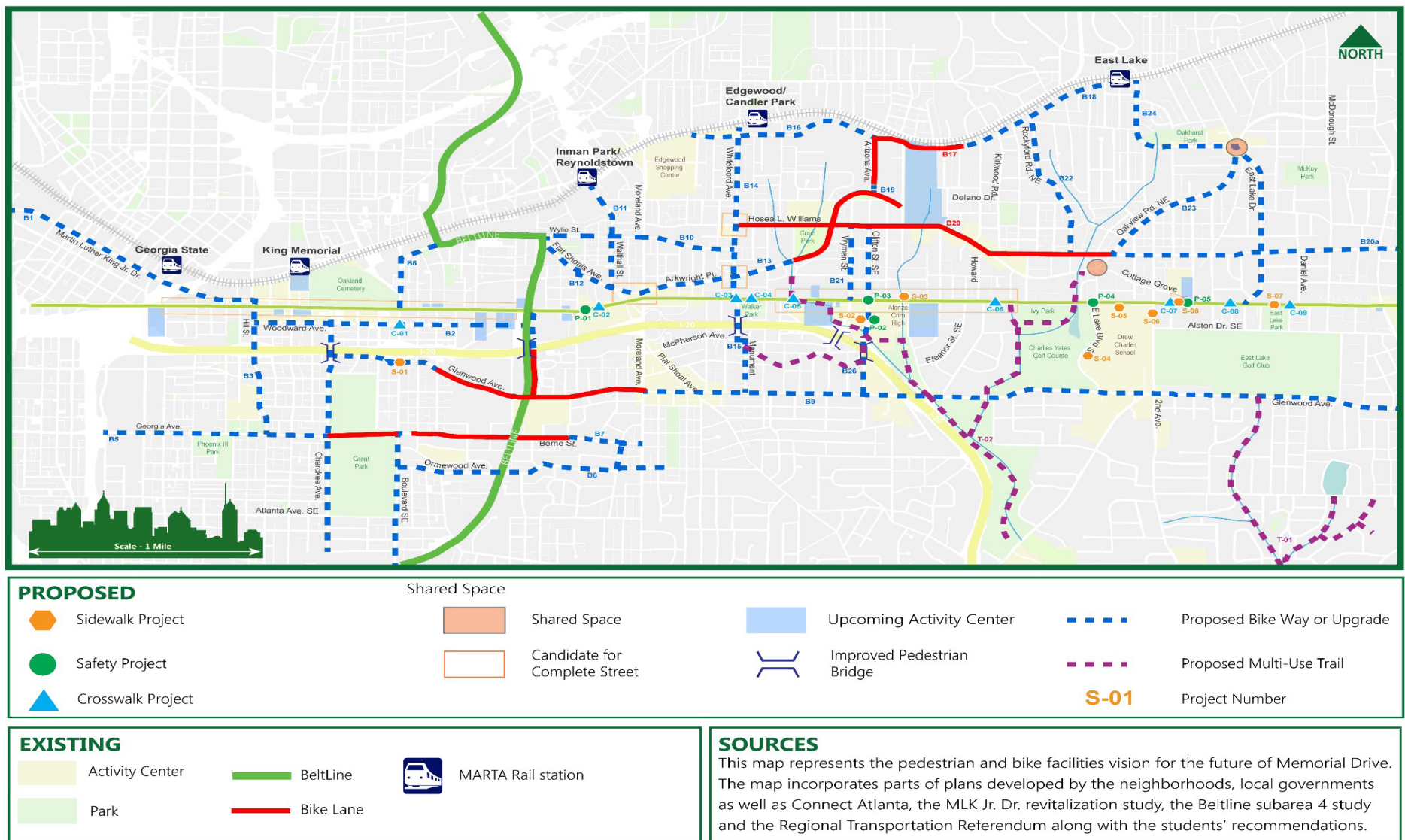


Figure 50: Map of proposed Connectivity Vision for Memorial Drive

This plan incorporates existing, proposed, and planned bikeways and multi-use trails from previous planning efforts, with some new additions based on updated analysis and development activity. It recommends pedestrian and bicycle enhancements to several bridges to link neighborhoods on either side of I-20. If fully implemented, it would offer parallel multimodal networks to the north and south of Memorial Drive and I-20.

Shared Space Intersection, Poynton, UK



Shared Space, Netherlands



Transit Right of Way Shared Space, Nantes, France

SHARED SPACE

Increased pedestrian safety
Slower traffic speeds
Easy pedestrian and bike crossings
Walkable urban design



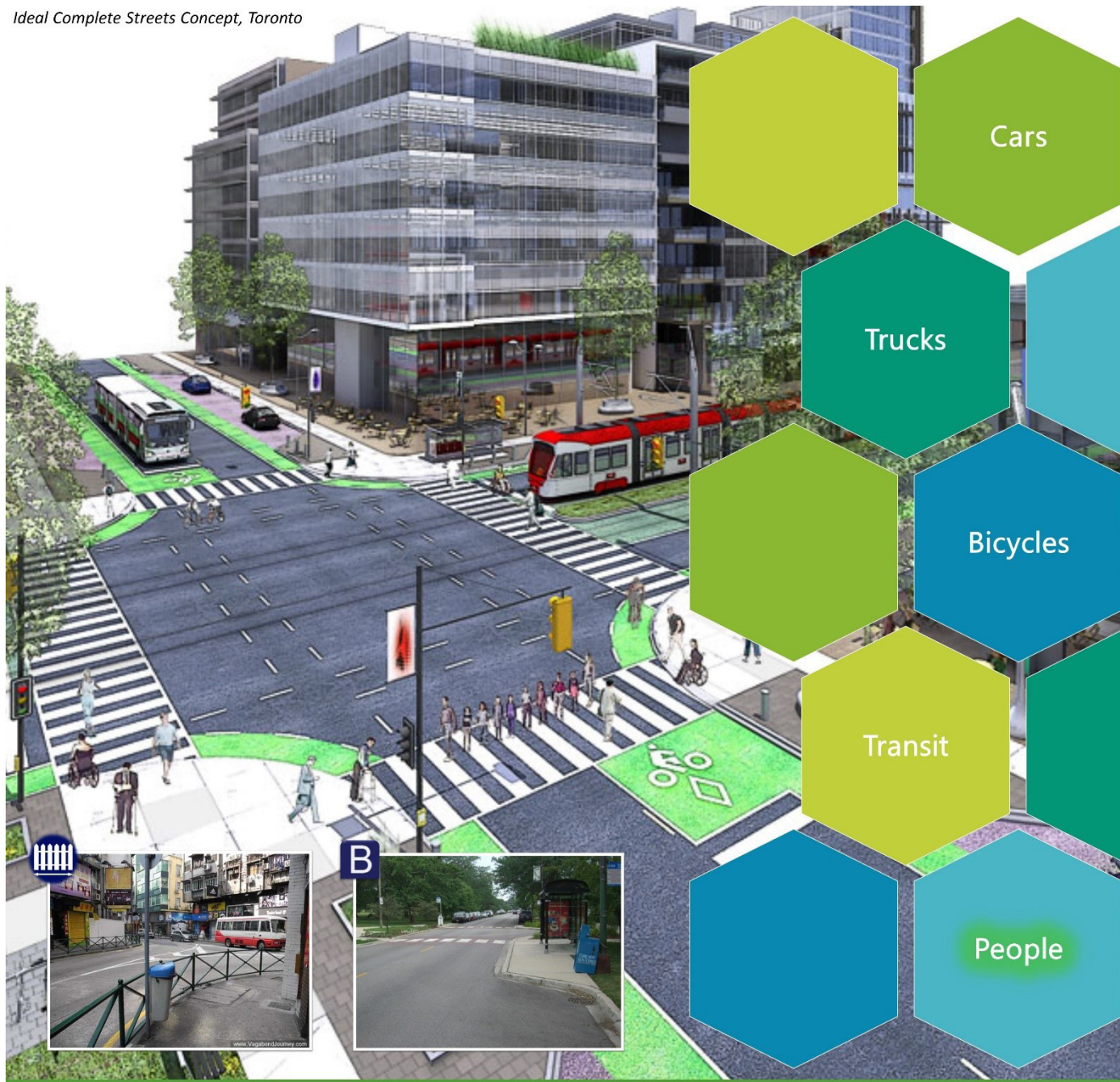
Shared Space, Savannah, GA

Multi-modal accessibility
All modes use same pavement
Shared travelways increase alertness
Autos yield to pedestrians and transit



Neighborhood-friendly environment
Gathering place for community
Commercial and activity hub
Public landmark opportunity

• Edgewood • Kirkwood • Grant Park • Glenwood Park • Cabbagetown • East Lake • Oakhurst • Reynoldstown • East Atlanta •



COMPLETE STREETS

Increased accessibility

Accommodates all travel modes
Accessible for limited mobility individuals
Transit and alternative modes improved



Increased safety

Visible bike lanes and boxes
Sidewalks with barriers and trees
Slower travel speeds



Complete Streets Bike Boxes, New Haven

Neighborhood-friendly environment

Gathering place for community
Commercial and activity hub
Public landmark opportunity



PEDESTRIAN FACILITIES

Reconnect neighborhoods

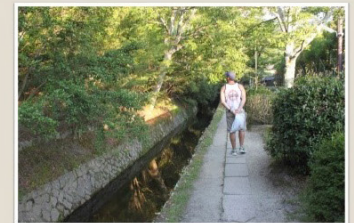
- Shorten travel times
- Increase walkability
- Promote neighborhood collaboration



Hazel St Pedestrian Bridge, Macon, GA

Increase safety

- Separate peds from high speed roads
- Provide safe access for children, elderly
- Promote healthy activity



*Pedestrian path, creek right-of-way, Japan
See Dekalb County Shoal Creek Trail*

Low-impact designs

- Affordable implementation
- Maintain neighborhood character
- Enhance existing travelways

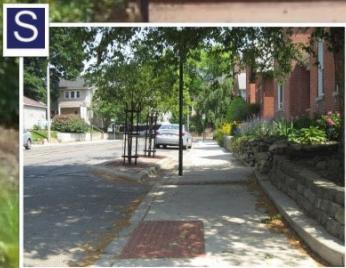
Cars

Trucks

Bicycles

Transit

People



Hazel St Pedestrian Bridge, Macon, GA

• Edgewood • Kirkwood • Grant Park • Glenwood Park • Cabbagetown • East Lake • Oakhurst • Reynoldstown • East Atlanta •

Ideal Project Designs

The images on previous pages display a variety of projects types which fit with the Imagine Memorial plan priorities and goals. These example projects were chosen due to their commitment to bicycle and pedestrian safety and accessibility. In order to generate awareness of alternative design types, several non-traditional designs uncommon in the United States were chosen to reflect the possibilities of a commitment to a pedestrian and bicycle oriented transportation network.

Connectivity Plan Methodology

The Imagine Memorial bicycle and pedestrian connectivity plan was developed through the previously mentioned activity center analysis, stakeholder and public input, collaboration with local agencies, and review of previous plans and programmed projects. Gaps in the existing bicycle and pedestrian network were identified through these resources and alternatives were developed according to accepted bicycle and pedestrian planning priorities. These priorities include safety, accessibility, and plausibility for implementation. Stakeholder input indicated that the north to south crossing of Memorial Drive, particularly within the Dekalb County portion of the study area, was in the greatest need of increased connectivity. Full painted and marked bike lanes were prioritized over shared lanes which are much less safe and comfortable for casual bicyclists. Roadways with limited traffic and available right of way were prioritized for bicycle improvements.

Pedestrian improvements were prioritized near schools, public gathering places, parks, and areas without existing sidewalk infrastructure. High visibility crossings were prioritized near intersections with high pedestrian potential and unsafe crossing conditions due to the speed of traffic and limited visibility.

Memorial Drive was avoided when possible for new bicycle and multi-use infrastructure due to the increased safety potential of parallel routes. Designated truck routes were also avoided for bicycle improvements due to the danger of truck and bicycle interactions. Direct routes between activity centers were chosen wherever possible.

Complete Streets and Shared Space Intersections

The complete streets design mentality is steadily gaining traction throughout the United States. The “complete streets” terminology refers to streetscape design which allows for the safe and comfortable passage of all travel modes, with an emphasis on walkability, reduced traffic speeds, and access to multiple travel modes. Design features of complete streets include:

- **Bike lanes:** Full width, striped, marked, and colored bike lanes are the ideal complete streets bike facility. These highly visible facilities provide bicyclists with safe and comfortable travelways which minimize conflict with other vehicles and pedestrians.
- **Bike boxes:** Bike boxes are painted boxes at intersections which allow bicyclists to pull in front of traffic at red lights, allowing them to continue before automobiles can begin right turns and avoiding right turn conflicts between modes.
- **Curb extensions:** Curb extensions temporarily narrow roadway width and force cars to slow down at intersections and pedestrian and bicycle crossings. They work well with highly visible painted crossings to provide safe routes for pedestrians. They can also provide additional waiting space for transit users at corner bus stops.
- **Pedestrian barriers:** These barriers create a slowing effect on traffic which passes alongside them. They also prevent pedestrians from falling into the street or crossing outside of designated crosswalks.

- Pedestrian Activated Hybrid Beacons (PAB) Beacons: Commonly known as High-Intensity Activated Crosswalk Beacons (HAWK), these hand-activated beacons force traffic to stop and yield to pedestrians at major crossings, such as those found near parks or transit stops. They can also be used for bicycle crossings along multi-use trails.

Additional components of complete streets design may include limited building setbacks to promote pedestrian activity, roundabouts and other traffic slowing measures, and tree plantings to reduce speeds and promote pedestrian safety. Visual examples of the improvements mentioned above can be found in preceding pages.

Shared space intersections are an extension of the complete streets design mentality. These intersections remove all signalization and limit signage. They make use of a flat pavement, often in a roundabout configuration, which is shared by all travel modes, from pedestrians to bicycles to trucks and cars. Changes in pavement texture are used to indicate crossings, roundabout centers, and other features. The lack of signals and signage forces traffic to slow dramatically, creating a safer environment for all users. It also allows throughput of vehicles to remain constant as cars and trucks navigate at a slow but steady speed through the roundabout intersection. Heavy trucks are able to pass directly across the intersection, avoiding the narrow turn radii often imposed by more typical roundabouts.

The shared space example represents a formerly signalized intersection in the city of Poynton, United Kingdom, that handles upwards of 30,000 vehicles per day while demonstrating a reduction in safety incidents and throughput consistent with a traditional intersection. The shared space design, while uncommon in the United States, is widely used throughout Europe and proven

to force vehicles to slow and respect alternative travel modes while creating the economic potential for the growth of a popular town or neighborhood center.

Bicycle/Pedestrian Improvement Designs

A series of cross-sections of major proposed bicycle and pedestrian routes were created to display the before and after configuration of key elements of the connectivity plan. Pedestrian and bicycle enhancements at I-20 bridge crossings were designed for the Clifton St, Maynard Terrace, Bill Kennedy Way, and Cherokee St bridges. Major bicycle improvements designed to capitalize on existing unused right of way along Arkwright Place were also designed. Figures 51 through 62 display cross sections of potential improvement designs.

The Flat Shoals/Arkwright Place redesign, as seen in Figure 54, makes use of a former trolley right of way as a fully featured, bidirectional bicycle and pedestrian boulevard. Removed entirely from traffic, this design feature is highly safe and accessible for pedestrian and bicyclists. Proposed along Arkwright Place and Flat Shoals Avenue, this feature will greatly enhance connectivity in adjacent neighborhoods.

In addition to the Arkwright facilities, proposed designs are available for multiple bridges across I-20, a major dividing force in the study area. These bridge are currently only moderately accessible to bicyclists and pedestrians. Improvement of these crossing points will greatly enhance north to south connectivity in the study area. The cross sections below demonstrate the feasibility of implementing fully marked, separated, and colored bike lanes at the indicated bridge locations. These designs allow bicyclists and pedestrians to cross I-20 with the same ease as automobiles.

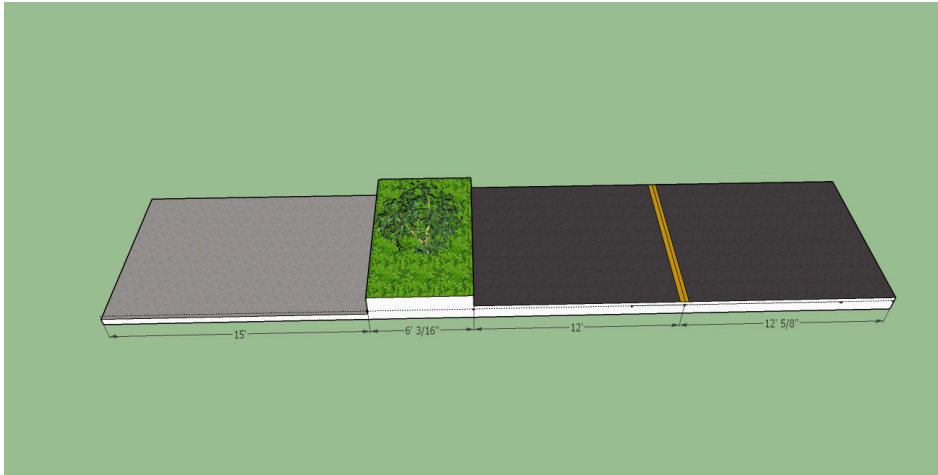


Figure 51: Current design of Flat Shoals Avenue in Reynoldstown, from Stovall Street heading east to Moreland Avenue

Broadly, Flat Shoals and Arkwright offer a safe multimodal east-west route across Moreland, largely because of an existing trolley bed that could be repurposed.



Figure 52: Current design of Arkwright Place in Edgewood, from Moreland Avenue heading toward Vannoy Street

The trolley bed is currently being used as an access road and parking for local residents and offers a wide right-of-way for alternative uses on an under-capacity street.



Figure 53: Current design of Arkwright Place in Edgewood, looking west from Vannoy Street

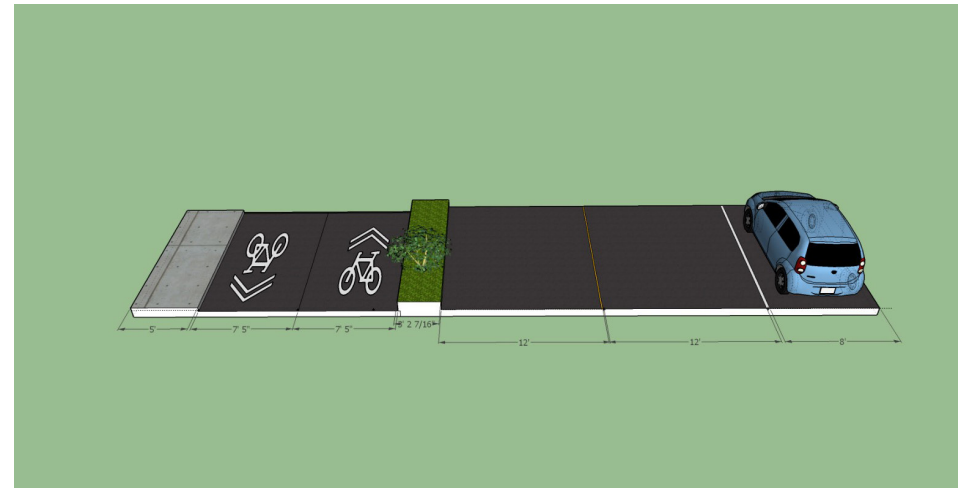


Figure 54: Proposed redesign concept for Flat Shoals and Arkwright Place, from Stovall Street in Reynoldstown to Hosea Williams in Kirkwood

A fully protected two-way bike route is possible in the trolley bed, while still allowing for two-way auto traffic and on-street parking for residents on most segments.

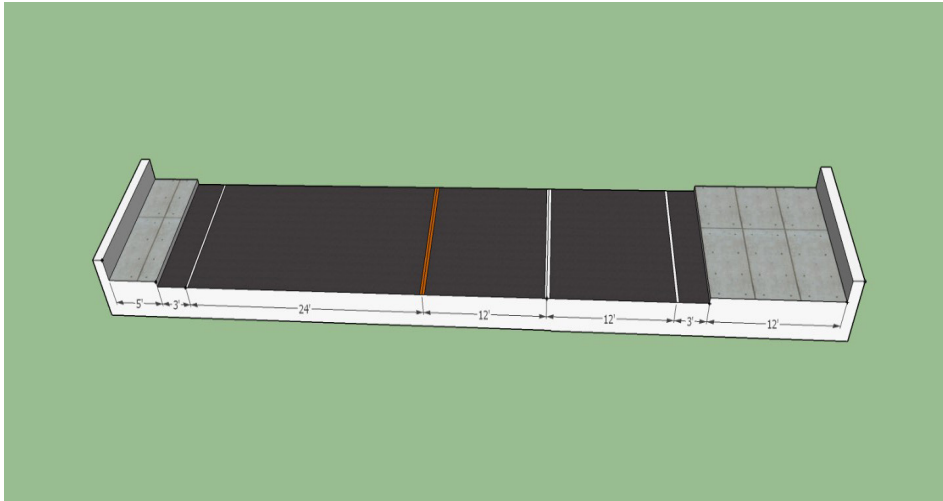


Figure 55: Current design of Cherokee Avenue bridge over I-20 in Grant Park, looking north

The bridge is wider than needed for current traffic volume. The sidewalk on the east side is adequate, but the west side is too narrow. This is a key connection between two historic neighborhood commercial centers.

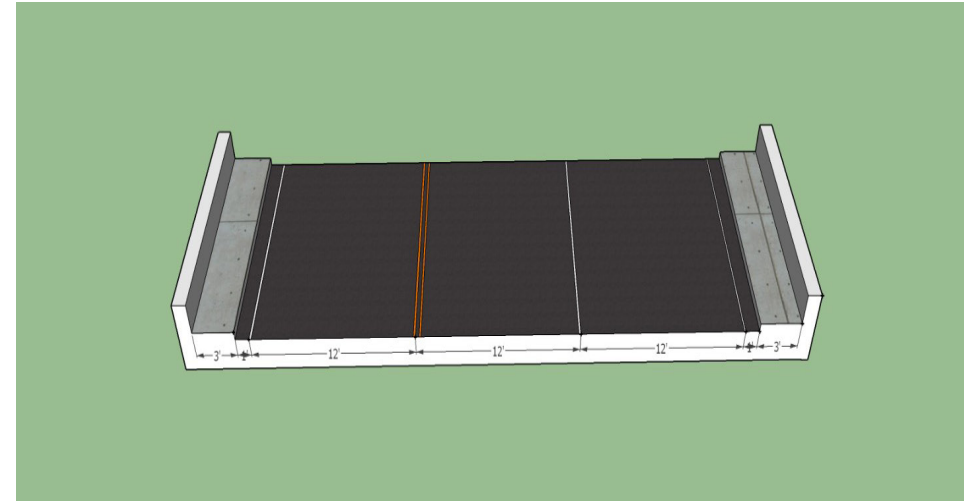


Figure 56: Current design of Bill Kennedy Way bridge over I-20 between Reynoldstown and Glenwood Park

It has a left-turn lane for the I-20 on-ramp. Bike lanes end abruptly. As part of the Atlanta BeltLine corridor, long-term design plans must consider future trail and transit capacity. But interim improvements are recommended.

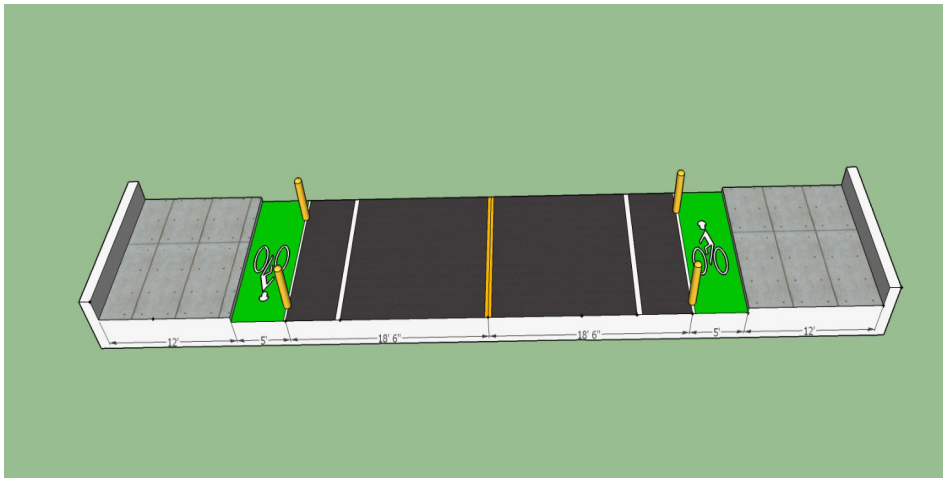


Figure 57: Proposed redesign of Cherokee Avenue bridge with painted and semi-protected bike lanes

There is room for painted and protected bike lanes in each direction, along with improved sidewalks on both sides and an additional buffer from auto traffic.

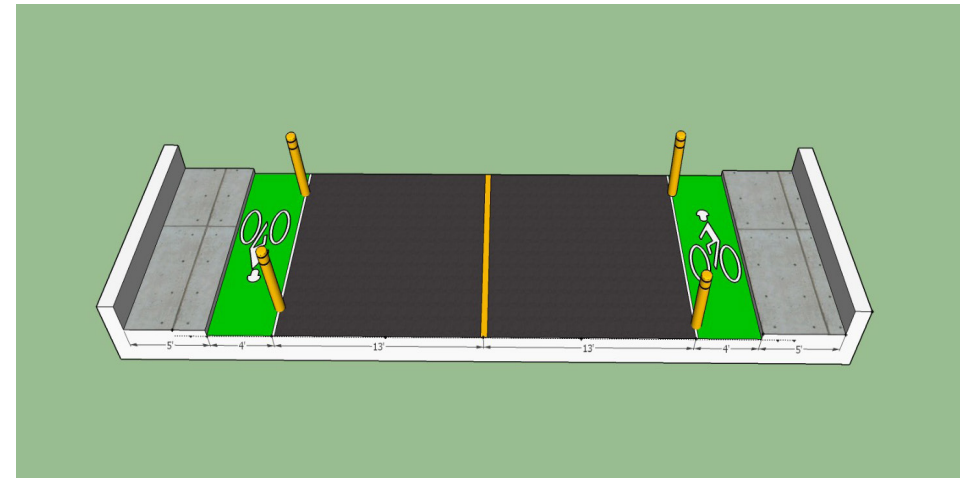


Figure 58: Proposed redesign for Bill Kennedy Way bridge over I-20

A painted and semi-protected bike lane in each direction, with improved sidewalks. This will be a key walking and biking connection for thriving communities south of I-20 to reach the new terminus of the Eastside Trail at Memorial Drive, well before the BeltLine continues southward.

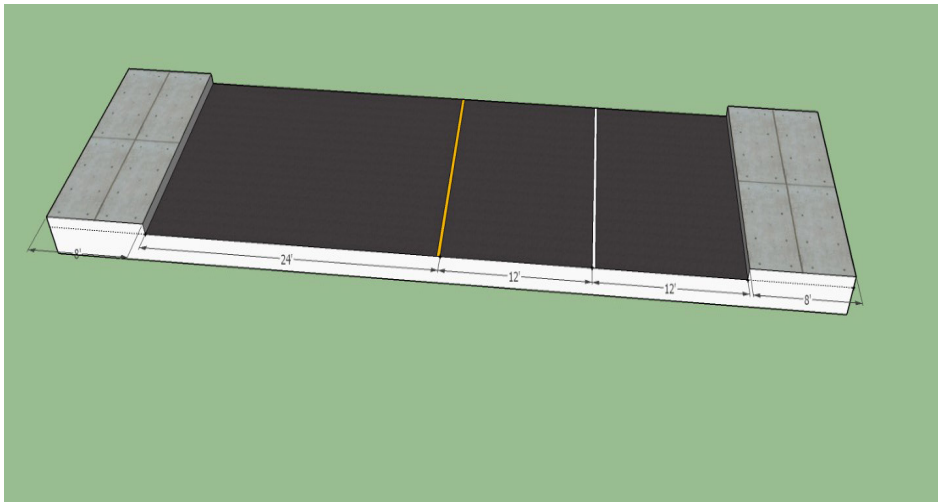


Figure 59: Current design of Maynard Terrace bridge over I-20 between East Atlanta and Kirkwood, looking northeast

The bridge is wider than needed for current traffic volume. The sidewalks on the bridge are adequate, but there is no crosswalk where it meets the off-ramp.

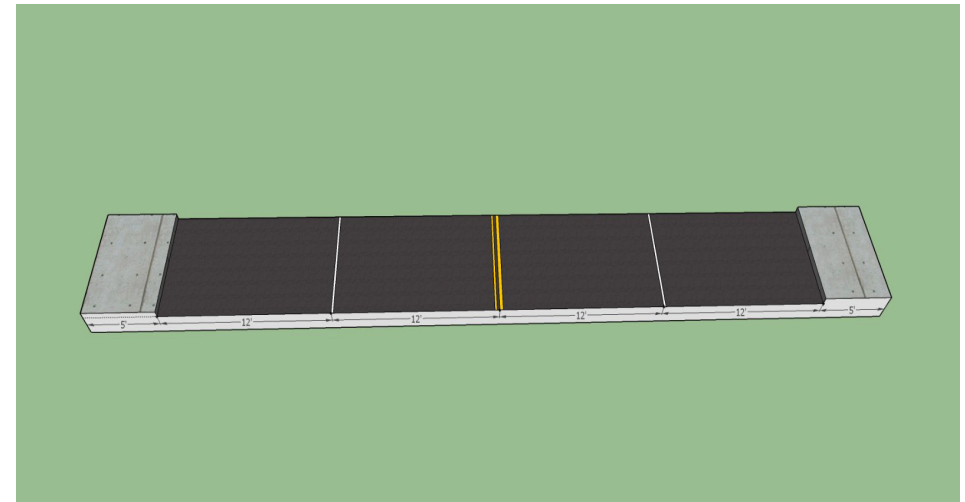


Figure 60: Current design of Clifton Street bridge over I-20 between East Atlanta and Kirkwood

The four-lane bridge is currently painted for two lanes and is under capacity. It's an important route for students at Alonzo Crim High School to the north. The eastern side has a narrow continuous sidewalk. The western side does not.

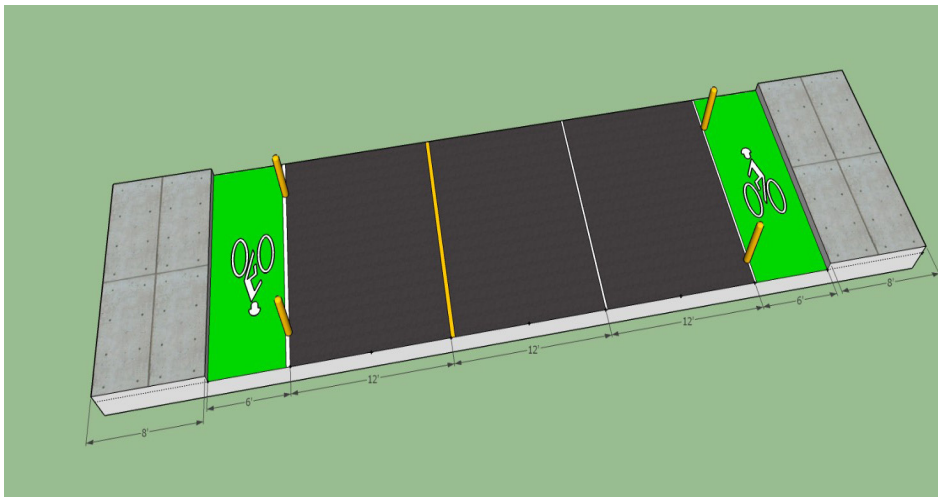


Figure 61: Proposed redesign of Maynard Terrace bridge with painted and semi-protected bike lanes

There is room for painted and protected bike lanes in each direction, while maintaining a left-turn lane for morning peak traffic using the on-ramp for westbound I-20.

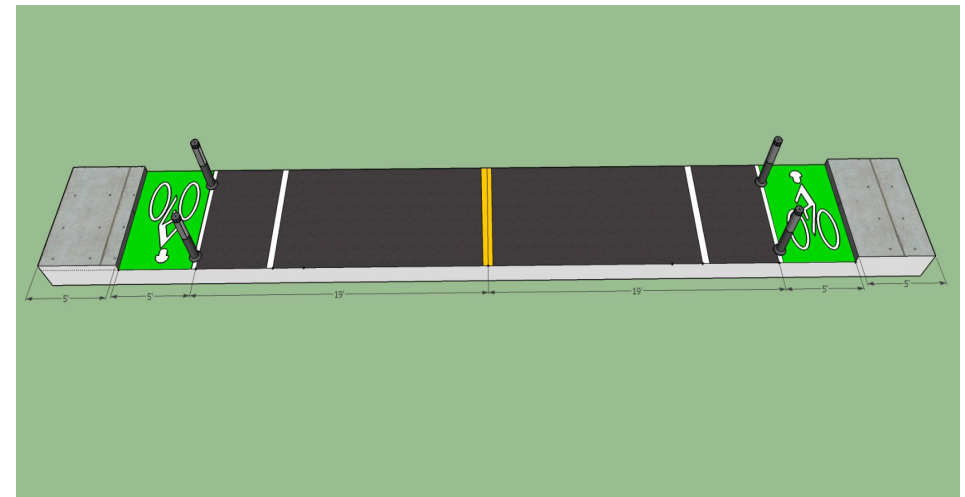


Figure 62: Proposed redesign for Clifton Street bridge over I-20

A painted and semi-protected bike lane is possible in each direction, along with improved sidewalks. There is further room for an additional buffer from car traffic.

VIII. IMPLEMENTATION

This section explores both the project and program costs of our findings, as well as potential funding mechanisms and outreach. As this seeks to be a showcase for creative financing mechanisms, public-private collaborations and partnerships are heavily emphasized for transportation, parks systems, mixed use housing, and economic development initiatives.

Investment Policy

More than just a way of funding the corridor, a wise investment policy can create stakeholders in different communities, as the basis for a broad, grass-roots coalition. While the focus is on Memorial Drive itself, the study area includes issues related to the extent that they extend to the north and south. Many LCI communities use special organizations or programs to further implement plans. The overarching goal is to form a leadership structure to manage and foster collaboration between various entities to work through the planning, financing and public-private partnership challenges that arise in serving the greater community. Most notably, the City of Atlanta, GDOT, private developers, business owners and residents will make up the group of stakeholders organized to leverage a combination of private and public funding. The mechanisms for sustained outreach will be carried out through the office of Natalyn Archibong at the City of Atlanta.

Potential mechanisms could include the following options:

1. Community Improvement District (CID)
2. Community Development Financial Institution (CDFI)
3. Community Stakeholder Coalition
4. Private Foundation

These mechanisms would convene prominent entities with interests along or near the development area, and will amass funding sources that would contribute to the goals of the LCI, predominantly in terms of connectivity and affordability. The City of Atlanta, through Invest Atlanta, the Atlanta BeltLine and various departments, would be responsible for assembling these stakeholders under these mechanisms.

Community Improvement District (CID)

A Community Improvement District, or CID, may supplement funding and managing certain governmental services including road construction and maintenance, parks and recreation, storm and sewage systems. The administrative body of the CID may levy taxes. The benefit of a CID is that the organization would have dedicated funding streams. Since commercial property owners would have a vested interest in transportation improvements and professional staff of the CID would serve as community advocates of the LCI goals, there could be widespread support from stakeholders.

Possible disadvantages of the CID structure is the formation of a CID requires city designation under state legislation and consent of 50% of property owners and 75% of the proportion in the target area, which could slow down the process. CIDs tend to be narrow in scope, and probably not applicable to the corridor as a whole.

While CIDs are a feature of established commercial neighborhoods, they have been used as a redevelopment tool. The Airport West CID is an excellent example. Formed as part of the broader LCI study that recommended an “aerotropolis,” the CID takes a relatively low income area, Camp Creek Parkway, and increases its tax base.

The Memorial Drive corridor would need one or more CIDs to effectively manage its target areas. There may be the potential for one along Memorial Drive west of Boulevard, and another around Memorial and Moreland. Each of these CIDs could use the revenue they collect to go into a dedicated project list, voted by the CID's board. That said, the CID may be too small to support a full-time staff that assists the board in program selection, funding and implementation.

Community Development Financial District (CDFI)

Community Development Financial Institutions, or CDFIs, provide credit and financial services to increase economic opportunity and promote community development. The CDFI Fund provides an allocation of tax credits to community development entities, which enable them to attract investment from the private sector and reinvest these amounts in low-income communities.

The certification process to apply for the CDFI program through the U.S. Department of Treasury requires the following requirements to be met:

- Be a legal entity at the time of certification application;
- Have a primary mission of promoting community development;
- Be a financing entity;
- Primarily serve one or more target markets;
- Provide development services in conjunction with its financing activities;
- Maintain accountability to its defined target market; and
- Be a non-government entity and not be under control of any government entity

This process may involve a cumbersome timeline to be certified through the Treasury Department. Additionally, initial

investors to start the CDFI Fund may be difficult unless there is promised support from various entities, especially in private development. Since the CDFI option provides resources to mostly low-income communities, our development area along the Memorial Drive Corridor should focus on such communities. Additionally, although there are affordability and poverty issues within the study area, concentrated lower-income areas are not geographically contiguous in the target area.

Community Stakeholder Coalition

A community stakeholder coalition is one in which a broad cross section of stakeholders can evaluate projects based on corridor-wide vision. These coalitions can be composed of neighborhood interests (likely NPU's), public sector interests (City of Atlanta, GDOT, MARTA), as well as business interests in the area. Such coalitions could have great political credibility if they reach consensus.

Foundation

Foundations are attractive because they could be a source of matching funds. One of the main uses of a foundation is to have the foundation match funds that the City, GDOT or another entity is either unable or unwilling to fund in its entirety.

A foundation offers two distinct strengths. The most obvious one is that it could provide a source of matching funds, which could accelerate project creation. Perhaps more subtly, but also more important, is that a foundation can continually refine and create a business case for Memorial Drive.

While a foundation can be made up of private sector entities and advance business goals, the IRS does not consider it

a for-profit institution. Rather, a foundation is taxed as a 501(c)(6), which is the same classification as trade associations and chambers of commerce.

Outreach

Outreach is the second leg of the implementation stool. Effective and sustained outreach can build the broad base of support necessary to facilitate any improvements made within the LCI study area, as well as maintain can also lay the groundwork for any LCI of other capital funding sources.

This section cannot project how outreach should be conducted. A far better judge of that would be both the concerned institutions and the stakeholders at the time the outreach is needed. What we can determine is who will most likely need outreach, and who can conduct outreach.

Outreach Plan

The below table outlines what outreach could look like for the Livable Centers Initiative (LCI). The outreach is divided into four phases with four different purposes:

1. Create – Focused on the institution building aspects that an LCI can offer
2. Inspire – Maintain accelerated support at the grassroots level, private sector and the institutional level
3. Inform – Evaluate initial performance of LCI and other programs through both quantitative and qualitative data, and communicate this with relevant stakeholders for buy-in
4. Renew – Build strong case to renew LCI after first five years as well as maintain momentum for other programmatic support

5 Year Transportation Implementation Plan

Our five-year plan prioritizes improvements that will improve safety and operation efficiency for all modes along the Memorial Drive Corridor, while enhancing accessibility to that corridor. The plan recommends innovative improvements that serve to lower speed, and make sections of the corridor more desirable.

The plan focuses primarily on GDOT projects along the corridor, and non-GDOT projects where close cooperation with GDOT makes absolute sense. Non-GDOT projects that do not touch Memorial Drive directly are not included in this plan. The exceptions are bike facilities along Hosea L. Williams Dr. and Glenwood Avenue, which separate bike trips from the main corridor.

The below is a cost estimate of the following projects. All costs include preliminary engineering (where appropriate), right of way acquisition, and construction. Unless otherwise noted, these costs do not include labor. Most of these projects will be funded by GDOT, with private money matching city of Atlanta funds for some of the pedestrian improvements.

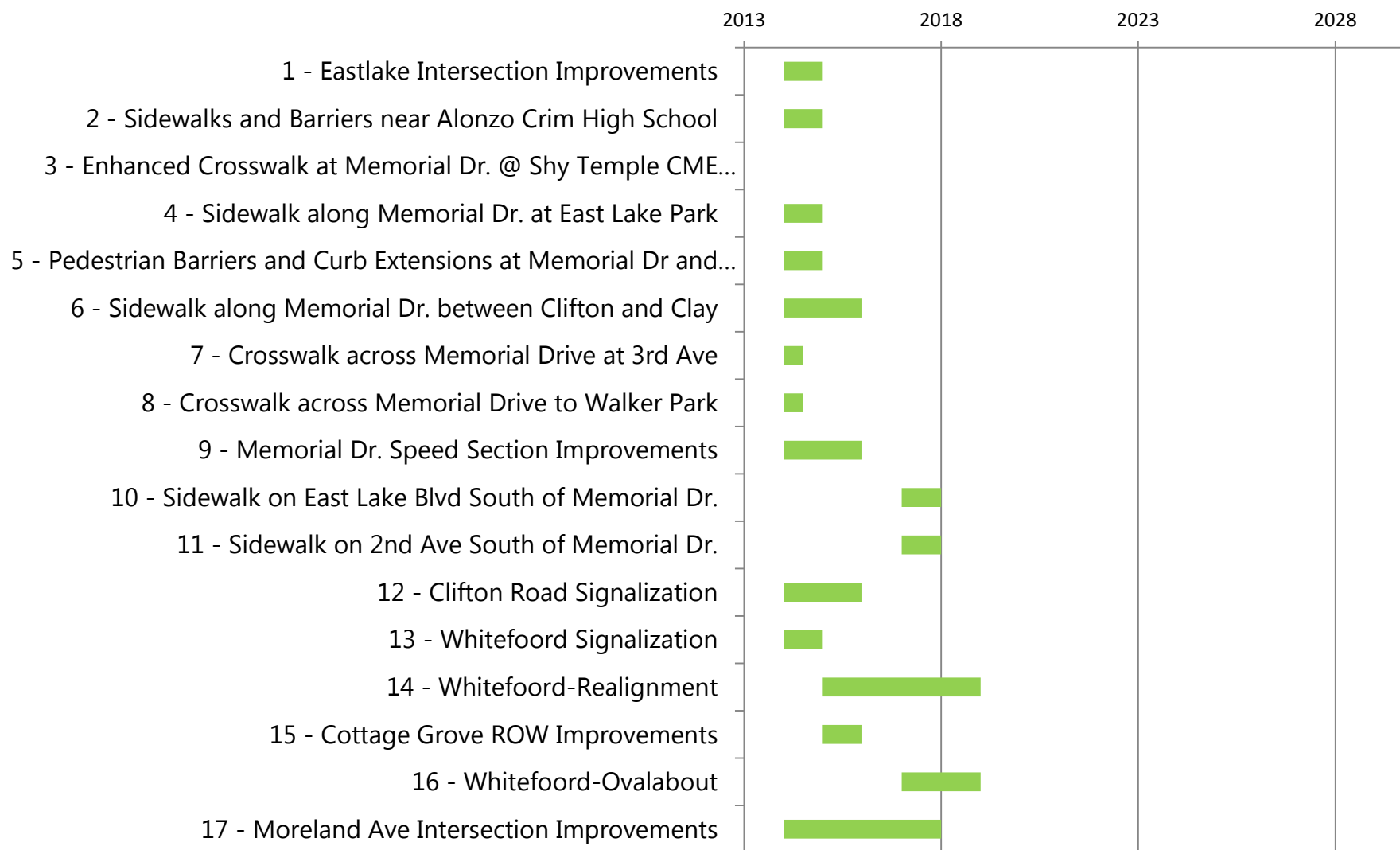
Longer Term Projects

As the LCI renews in five years, Imagine Memorial believes there will be more projects to improve other sections of the corridor. For instance, the studio recommends a roundabout at Bill Kennedy Way, intersection improvements at Boulevard, and various other projects found elsewhere in the report. The projects prioritized five years out, though, are meant to give the area the biggest gains for safety.

FIGURE 63: Cost Estimates of Various Projects Along Memorial Drive

| Improvement | Investment |
|--|-------------------|
| 1 - Eastlake Intersection Improvements | \$107,760.00 |
| 2 - Sidewalks and Barriers near Alonzo Crim High School | \$52,440.00 |
| 3 - Enhanced Crosswalk at Memorial Dr. @ Shy Temple CME Church | \$3,000.00 |
| 4 - Sidewalk along Memorial Dr. at East Lake Park | \$98,110.00 |
| 5 - Pedestrian Barriers and Curb Extensions at Memorial Dr and Clifton | \$20,910.00 |
| 6 - Sidewalk along Memorial Dr. between Clifton and Clay | \$11,610.00 |
| 7 - Crosswalk across Memorial Drive at 3rd Ave | \$3,000.00 |
| 8 - Crosswalk across Memorial Drive to Walker Park | \$3,000.00 |
| 9 - Memorial Dr. Speed Section Improvements | \$3,285,196.80 |
| 10 - Sidewalk on East Lake Blvd South of Memorial Dr. | \$32,000.00 |
| 11 - Sidewalk on 2nd Ave South of Memorial Dr. | \$21,750.00 |
| 12 - Clifton Road Signalization | \$499,468.80 |
| 13 - Whitefoord Signalization | \$315,748.80 |
| 14 - Whitefoord-Realignment | \$1,107,628.80 |
| 15 - Cottage Grove ROW Improvements | \$2,534.00 |
| 16 - Whitefoord-Ovalabout | \$1,435,732.80 |
| 17 - Moreland Ave Intersection Improvements | \$148,104.00 |

Figure 64: Timelines for Projects along Memorial Drive Corridor



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Appendix:

Exhibit 1: Detailed list of connectivity improvements

